

American Booty

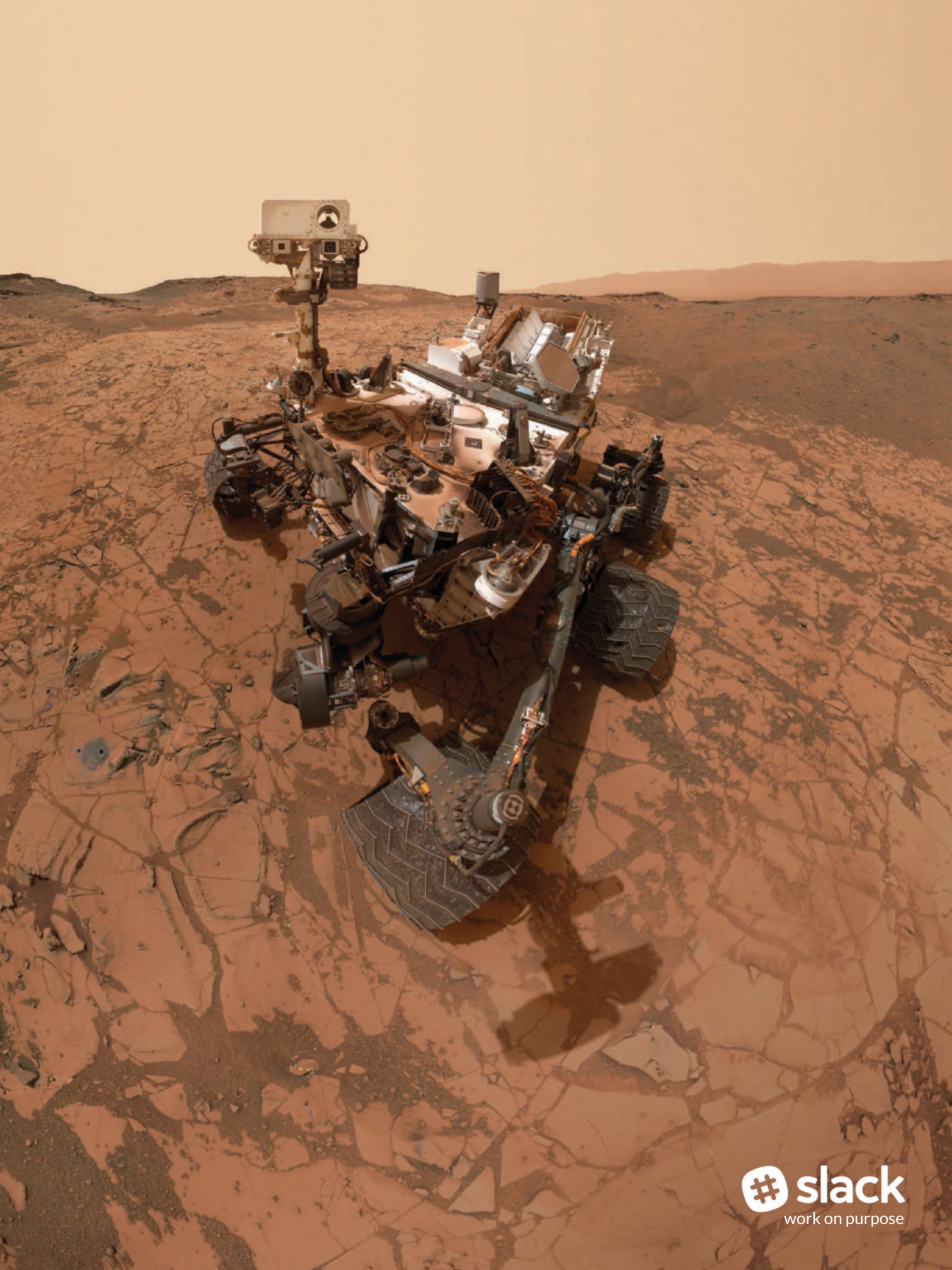
A pair of light blue Levi's jeans hangs on a mannequin in a factory setting. A hand wearing a purple nitrile glove holds a spray gun, applying a rainbow-colored paint to the back pocket of the jeans. The background is a dark, industrial environment with various mechanical parts and pipes.

They've survived the Civil War.
The San Francisco quake.
The *Titanic*. But can Levi's beat back...
yoga pants?



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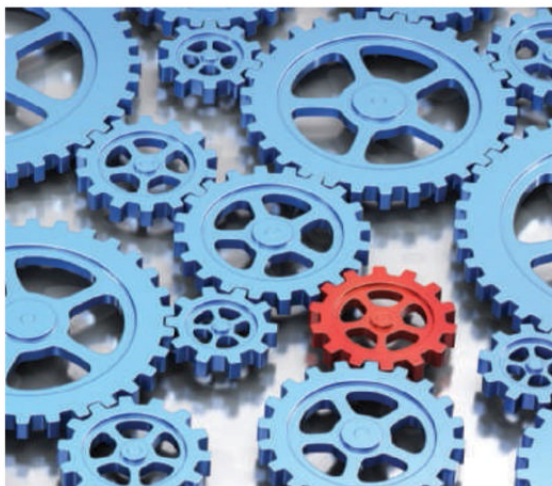
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The Importance of Being Resilient

Preparing For Risk Rebounds

Recent events in Europe have underscored the potential for a single disruption to have worldwide consequences. Is your business prepared to bounce back if it has to?



A single risk event sets in motion countless others that are felt by businesses everywhere.

As the drama surrounding Greece's inability to repay its IMF loans reached a fever pitch in recent weeks, it seemed torn from the pages of "Global Risks 2015," an annual report by the World Economic Forum that is essentially an owner's manual to globally interconnected risks. An area of great concern in the report is the interplay between geopolitics and economics, and their cascading consequences.

"The report has been a very good indicator of what has unfolded so far this year," says Dan Riordan, CEO, Zurich Global Corporate in North America.

Greece's situation has created major fissures in the EU, with potential knock-on effects that could eventually stall the entire continent's economic recovery and perhaps lead to similar scenarios for other EU nations. If those risks materialize, the consequences will be felt around the world in ways nearly too numerous to count.

The sheer complexity of interconnected risks could lead some business leaders to conclude that they are unmanageable. How can you allocate resources for holistic strategic and operational risk mitigation when there might be risks to your business that you don't even know exist?

Total risk profiling

It's unlikely that any company can identify all of the global risks—and their repercussions—that could disrupt its business. That's why the focus of risk management

experts is turning toward increasing the overall level of resilience—the ability of your business to bounce back from risk events.

"Risk management techniques certainly have improved in recent years, with better processes for identifying and prioritizing risks," says Riordan. "What's often the missing piece, however, is a way for companies to integrate risk considerations into their operational activities. That's where insights from a global insurance provider like Zurich can play a key role."

To help businesses increase their resilience to globally interconnected risks, Zurich has developed a platform merging financial and technical risk management. Its Total Risk Profiling® risk identification and prioritization employs a workshop-based approach to create a holistic, 360-degree solution. A Zurich facilitator-led team first builds a risk profile by establishing relative ratings in terms of likelihood and impact of risk scenarios. From these scenarios arise the root issues:

vulnerability (i.e., what, where?), trigger (how, why, when?) and consequence (how big, how much?).

Total Risk Profiling® allows organizations of all sizes to determine their risk appetite and prioritize risks accordingly. In Zurich's systemic, top-down approach, action plans are created that move those prioritized risks within a company's tolerance boundary—the level with which it feels comfortable.

"When you have a multitude of risks that can originate from anywhere—be they economic, cyber, social or political risks—their interconnectivity is relevant to businesses everywhere," says Riordan. "Building resilience to those risks is about breaking them down—the blocking and tackling of identifying, assessing and providing solutions to them on a holistic basis. Companies that build resilience into their operations can be better prepared to respond and resume business as quickly as possible when risk events do occur."

"What's often the missing piece is a way for companies to integrate risk considerations into their operational activities, from budgeting and business continuity to strategic planning and supply chain management."

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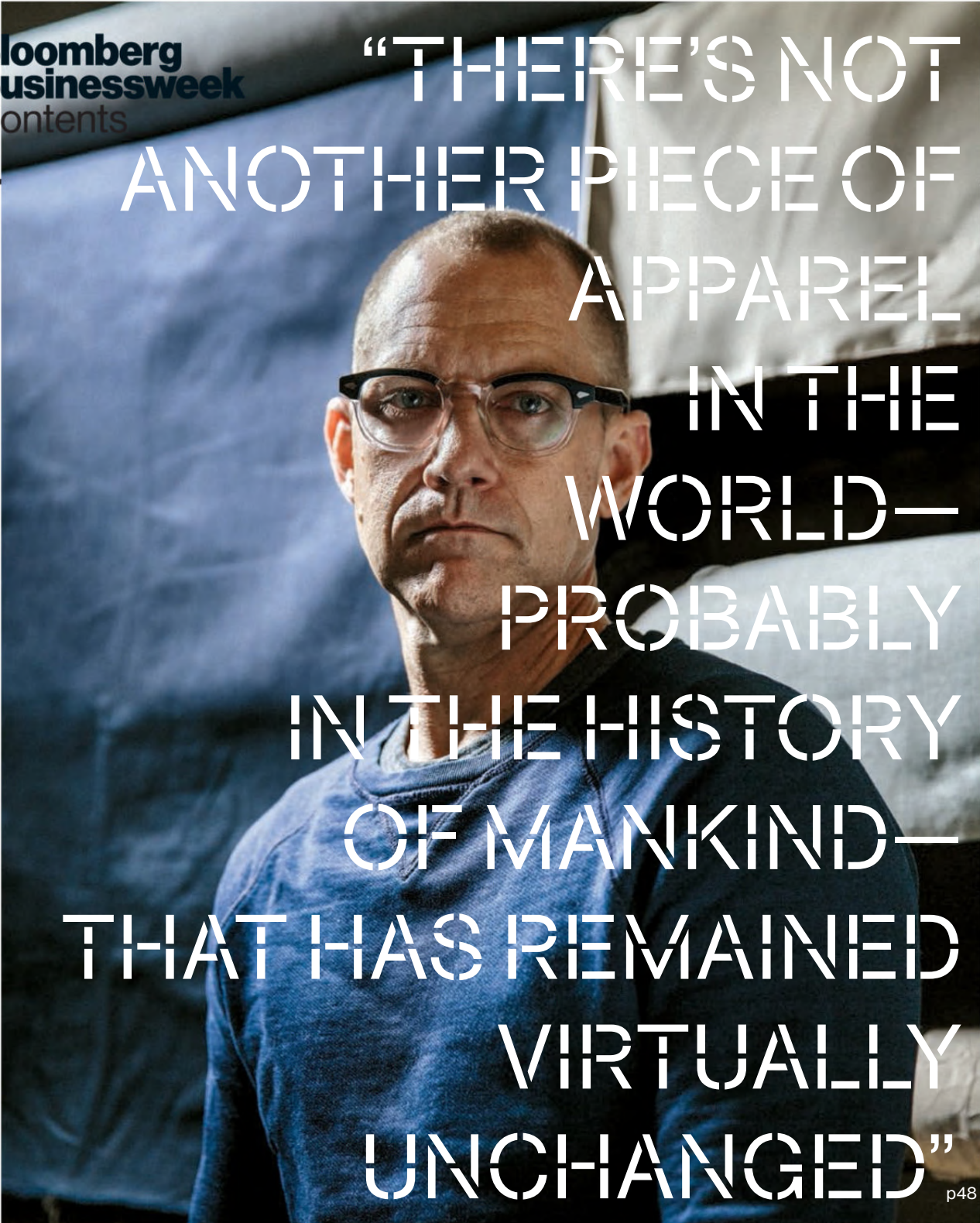
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“THERE’S NOT
ANOTHER PIECE OF
APPAREL
IN THE
WORLD—
PROBABLY
IN THE HISTORY
OF MANKIND—
THAT HAS REMAINED
VIRTUALLY
UNCHANGED”

p48

**“My little running
joke was, ‘I keep
a little place,
close to work’”**

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**“An Australian giving
tips to Americans on dill
pickles? That’s like giving
tips to Mike Jordan on a
slam-dunk”**

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**“The responsibility
for the dysfunction
lies with
somebody else”**

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Cover Trail

How the cover gets made

Domestic and Asian Cover

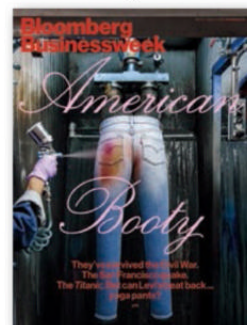
1

"Cover is on Levi's, and how it's working to compete with yoga pants."

"It's about time someone tackled one of the most destructive and troubling forces in modern-day society. How will it compete?"

"It's experimenting with new fabrics, washes, and fits in a lab in San Francisco."

"We could shoot the lab for the cover. Or we can illustrate a woman wearing Lululemon choking an 1800s Levi's-clad pioneer with her legs."



European Cover

1

"The story is about a new airport in Berlin that hasn't been able to open."

"Very compelling. What's keeping it from opening? Did a deadly virus break out at the terminal? Terrorist threats? A natural disaster?"

"Mostly poor planning and mismanagement."

"I see. So what exactly is the irresistible lure of this story?"





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Opening Remarks

The Meaning Of China's Stock Market Intervention

By Joshua Kurlantzick

The government's decision to prop up slumping markets may well signal a comeback for centralization

The spectacle of the stock market meltdown in China has led many analysts and investors to see an upside to the downturn. The slump is “the most serious crisis” facing President Xi Jinping “since he came to power,” China commentator Willy Lam told an audience of academics in Vancouver on July 10. “It will require a lot to restore people’s confidence in the regime.” Volatility might force the state to clean up the unregulated loans fueling stock purchases and to intervene less in equity markets and the broader economy. The drop might even foster massive discontent with the Communist Party and support for real political reform. That’s because in China, unlike other major nations where large institutions dominate the markets, retail investors—90 million or so individuals, most of them belonging to the urban elite—do most of the investing.

In reality, the stock market plunge is likely to have the opposite effect. Xi’s government is too closely linked, in many citizens’ minds, to a guarantee that stocks are a safe and profitable bet. “When a market malfunctions, the government should not let market sentiment turn from bad to worse. It should use powerful measures to strengthen market confidence,” said a July 20 commentary in the *People’s Daily*, the official newspaper of the Communist Party. To forestall public discontent, the regime is likely to become more interventionist in the market and possibly in the broader economy as well. It has made \$483 billion available to the China Securities Finance Corp. to prop up the stock markets. While that might restore calm and foster short-term stability, it won’t benefit China or the world economy in the long run.

There’s no doubt that some Chinese investors—especially novices who hadn’t previously witnessed a selloff—feel betrayed by Beijing’s assurances of prosperity. China’s financial microblogs, where ordinary investors chat and which had focused previously on market tips, are now full of broadsides against the government. One furious investor posted an essay that soon became a viral sensation. Ruing that the crash had wiped out the savings of many members of the middle class, he said, “For us the ‘Chinese dream’ is just a dream.”

At the same time, most critics on the microblogs haven’t called for faster economic or political liberalization. Instead, they demand the government do more to “save” the exchanges, even if that gives the central government greater powers. The pace of the selloff seems to have convinced Beijing, too, that it should intervene more in the markets, not less.

The government has launched several

plans to reform its exchanges, but these have been dwarfed by its efforts to stop the decline in stock prices. Apart from pouring state money into the market, it is also believed to have been behind announcements by China’s brokers association of a new target—4,500—for the Shanghai Stock Exchange Composite Index. (It peaked above 5,000 in mid-June before plunging to 3,500 in early July; it’s recovered to about 4,000.) Beijing halted initial public offerings, recruited state banks to funnel at least \$200 billion to brokerages to help buy shares, and used official speeches and commentary to assure citizens the market will stabilize. According to a leaked document posted by *China Digital Times*, the government also instructed state media to reduce coverage of the market.

Chinese analysts say these interventions are the first of many efforts to control the markets more closely. Junheng Li, an analyst with JL Warren Capital, wrote that in the wake of the plunge, “a free functioning and independent capital market [is] inconsistent with the control that the Communist Party is striving for.” Many Chinese economists expect that if these interventions don’t get the market rising again, the regime will dedicate even more funds, primarily from state banks and organizations, to what are essentially share buybacks. That would give Beijing greater control of both the equity markets and companies on the exchanges, because the government can decide which companies will benefit from its investment.

In addition, Xi’s administration might well impose drastic, long-term curbs on traders that it believes have repeatedly sold short, a violation of market norms. Announcing plans to reduce the practice in early July, the government said it would take action against “malicious short selling” but left vague which types of shorting would count as “malicious,” giving it even more latitude to shut down traders.

Some analysts have noted that China’s slumping stock market hasn’t yet caused a significant slowdown in economic growth and that Beijing’s handling of equities might have minimal impact on the government’s management of China’s macroeconomics. But the response to the crisis sets a tone for the broader economy. Xi had promoted financial reforms, including changes in the equity market, as part of the overall agenda of economic liberalization. Market forces would be allowed to play a “decisive” role in determining the direction of the economy, Chinese leaders announced in a major communiqué in November 2013, after a meeting of the party’s Central Committee.

That promise is undermined by massive intervention in equity markets.

“As the stock market was plunging over the past few weeks, the government moved away from market-based reforms” it previously vowed, noted David Dollar, the U.S. Department of the Treasury’s economic and financial emissary to China from 2009 to 2013 and now a senior fellow at the Brookings Institution. It’s also sending a signal to opponents of liberalization, including leaders of state enterprises and the conservative wing of the party, that the government’s commitment to decentralizing the economy may be wavering. Conservatives and leaders of state enterprises will use these signals to press their case that reforms of state banks and the broader economy should be slowed—that state enterprises, powerful symbols of Chinese prestige, shouldn’t be broken up and privatized in case they’re needed to help bail out the stock markets again

or to “save” other parts of the economy.

Already, state enterprises have become skilled at making their case that economic reforms are injecting too much instability and potentially giving foreigners power over markets. During and after the 18th Party Congress in 2012, several executives from government-owned enterprises lobbied the incoming Xi administration heavily and succeeded in keeping it from taking steps to reduce the power of state companies in many industries, according to Chinese academics and businesspeople.

The intervention in the stock markets may stall efforts to further open Chinese exchanges to the world, making reform of the financial system harder. Beijing will almost surely slow plans to allow foreign companies to hold IPOs in China or to have foreign financial companies play a bigger role in trading shares on Chinese

State enterprises want to preserve their prestige—to the detriment of new and vibrant private industries

exchanges. These changes would have promoted transparency and probably reduced the state’s power over the exchanges.

Some Western companies are growing wary because of the market interventions. BlackRock, which already trades shares on Chinese exchanges, warned that if the government continues to bolster markets, “there are going to be fewer global participants” in China’s exchanges.

A weakening of Xi’s reform plans would be dangerous for China and for the world. Xi and Premier Li Keqiang have rightly noted that China’s growth was too dependent on increases in money supply, debt, and investment driven by the state—an unstable base for sustainable expansion. Already, the country’s total debt-to-gross domestic product ratio is one of the highest among large economies.

Allowing China’s vibrant private industries more room to flourish and making equity markets and the real economy fairer and cleaner would create a sturdier foundation for growth. According to a study by the McKinsey Global Institute, Chinese companies have become highly innovative in areas such as telecommunications with the relative liberalization of the past decade. The country will never become a leader in innovation unless the state allows markets to work even more freely.

Indeed, without reforms that empower the private sector, it will be challenging for China to maintain the high growth rates that have become critical to spurring its global expansion. Eventually, relying on state interventions could lead to a crash in China’s real economy—one that would be a global calamity, not just a disaster for Chinese stock traders. **B**

Kurlantzick is a senior fellow for Southeast Asia at the Council on Foreign Relations.



Slimming Down The Pentagon

McCain and Thornberry have radical and worthwhile reforms in mind



U.S. military spending has doubled since 2001 and urgently needs to be brought under control. This can't happen overnight, because most big-ticket acquisitions are budgeted over years and decades, and lawmakers always step in to protect factory jobs and unneeded bases in their states. Even the smallest changes to health-care and retirement programs face backlash from veterans' groups.

Fortunately, the new heads of both the Senate and House Armed Services committees, John McCain (R-Ariz.) and Mac Thornberry (R-Texas), are pushing for radical change.

Representative Thornberry's bill would require those in the Pentagon purchasing process to get "private-sector" training in acquisitions, speed up the way off-the-shelf technology is bought, take some of the legal complexity out of purchasing, and cut away some of the red tape that makes it hard for small businesses to bid on federal contracts.

Senator McCain's bill would do even more—by shifting fundamental responsibility for acquisitions. It would give the service chiefs themselves primary authority, in effect demoting the Defense Department's acquisition, technology, and logistics office to an advisory role. Under the current system, in which the secretary of defense's office has authority for research, development, and procurement, too many committees have a hand on the steering wheel, and too many offices have to wait for a green light from others. And when the people who buy military hardware have too much time on their hands, it turns out, the inevitable result is "requirements creep"—escalating requests for gold-plated widgets. It's a big reason the new *USS Gerald R. Ford* supercarrier ended up \$2.4 billion over estimate.

McCain's system would reduce the paperwork and manpower involved, and it would give the services more freedom to save money, including by working with tech companies and others that aren't traditional Pentagon contractors. It would also create a \$600 million fund for "rapid acquisition authority" to let the services bypass rules on competitive contracting—and to get weapons more quickly into the hands of troops fighting Islamic

State. The Senate bill also urges the military to switch to fixed-cost contracting where possible, shifting the cost of runaway projects to the big contractors. Pentagon overruns on major purchases average about 25 percent.

This new freedom would come with responsibility. Each service would be on the hook for cost overruns and delays, subject to an annual fine of 3 percent of the cumulative cost overrun (assessed from its general research and development budget).

Needless to say, the civilian side of the Defense Department is pushing back. Nonetheless, McCain's radical shift of authority to the services and Thornberry's efforts to streamline should be combined and sent to President Barack Obama for his signature.

Congress Needs Marijuana Research

The medical use of the drug shouldn't be based on sob stories

In July, the House Rules Committee rejected an amendment to a biomedical-research bill that would have directed the National Institutes of Health to investigate the benefits and risks of using marijuana for medical purposes—research that federal law hampers. The sponsors of the amendment hold conflicting views about the efficacy of medical marijuana. Each side believes that more research will strengthen the case for or against its use, but they have yet to convince House Republican leaders.

Almost half of all states have legalized medical marijuana, but the discussions involved in the process have been dominated by emotional stories of suffering or drug abuse. Largely missing from the debate has been the most essential element: scientific evidence suggesting that marijuana does anything to alleviate physical suffering. A study released in June found weak evidence to support using marijuana to treat many conditions for which states have approved it, including nausea from chemotherapy, sleep disorders, and Tourette's syndrome. It did better in treating chronic pain and spasticity arising from multiple sclerosis.

Yet states now allow the drug to be used to treat everything from anxiety to writer's cramp. One California medical practice lists more than 250 applicable conditions. Other states have adopted more stringent rules, but even these laws go beyond what the scientific evidence supports.

Pot is not harmless, after all. It's associated with a wide range of dangers. Too little is known about how it affects brain development (particularly among teenagers), mental health, and lung disease. For people who are already seriously ill, it could end up doing more harm than good—especially today's more potent strains and highly intoxicating edible products. To treat medical marijuana as a stalking horse for full legalization, as many of its advocates do, is plainly irresponsible.

Protecting public health and safety hinges on arming both patients and lawmakers with better information. This requires that opponents of medical marijuana in Congress put more faith in scientific research. **B**

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► Yellen squares off against Congress over who controls the central bank

► The Fed “continues to communicate monetary policy by picking words out of a thesaurus”

Federal Reserve Chair Janet Yellen isn't feeling a lot of love. She's under attack from both conservative Republicans and liberal Democrats. She's fending off a House of Representatives subpoena regarding a leak of economic data. And Americans in a Gallup Poll last November ranked the Fed second-to-last among 13 federal agencies for performance, just ahead of the Department of Veterans Affairs. Most recently, House Financial Services Chairman Jeb Hensarling told Yellen during her semiannual testimony on monetary policy on July 15 that the Fed's guidance has been “somewhat amorphous, opaque, and improvisational.”

What's surprising is that animosity toward the Fed is so strong now, considering that the unemployment rate is

down to 5.3 percent, consumer prices are up just 0.1 percent over the past year, and the Fed is winding down the stimulus it began during the financial crisis. Much of the recent criticism is focused on its role as a bank regulator, not as a steward of the economy. Some is partisan. Either way, the dissatisfaction feeds into a general mistrust that could gradually undermine the Fed's independence in setting monetary policy—i.e., raising and lowering interest rates to modulate growth. “The rancor on this is a huge issue,” says Columbia University economist Frederic Mishkin, a former member of the Fed's Board of Governors.

It's been understood since the 1970s that independent central banks produce more stable growth, partly because they don't overstimulate the

economy to please politicians. Members of Congress taking aim at the Fed say they intend to preserve its independence; they just want it to stick to a plan and explain itself. The Fed “continues to communicate monetary policy by picking words out of a thesaurus,” says J.W. Verret, a George Mason University School of Law professor who helped craft a Fed transparency bill introduced this year by Republican Representatives Scott Garrett of New Jersey and Bill Huizenga of Michigan.

Yellen and her allies in academia argue that obliging the Fed to obey a monetary policy rule—even one it set for itself—would reduce the bank's flexibility and increase the risk of mistakes. Republicans often cite a rule created by Stanford University and Hoover Institution economist John Taylor that



prescribes rates according to the level of inflation and whether the economy is operating above or below its capacity. While the Taylor rule is a useful tool for deliberations, “it would be insane” to make it binding, says Mark Gertler, a New York University economist. Advocates of a Taylor-like rule say Fed policymakers could deviate from it as long as they explained their reasoning to Congress. That doesn’t reassure Gertler,

who says the Fed could come under intense pressure to stick to the rule even if the bank concluded it was no longer appropriate. “Congress is a thoroughly political institution, and you want to keep monetary policy as far away as possible from that institution,” he says.

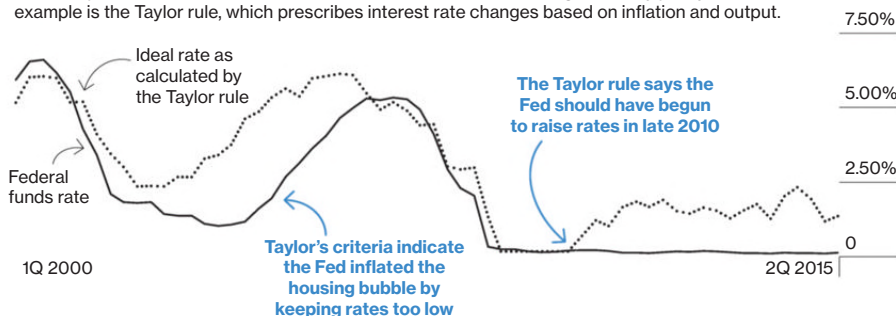
The Fed is still trying to live down the last decade’s regulatory troubles, when it allowed a bubble in subprime mortgages to form and then, when

the bubble popped, rescued financial institutions in a way that struck some critics on the right and the left as arbitrary. Democratic Senator Elizabeth Warren of Massachusetts is a stinging critic of the Fed as a regulator—even though she wants to preserve its monetary-policy independence.

Yellen lacks the political skill of former Fed Chairman Alan Greenspan, who regularly lunched with his critics, says Mark Calabria, a former senior staffer on the Senate Banking Committee who directs financial regulation studies at the Cato Institute. Lately the Fed has hurt its cause by fumbling the investigation into a leak of market-moving details from a September 2012 meeting of the Federal Open Market Committee. A staff review ended with no action. Now Yellen says she won’t comply with a congressional subpoena for information about the leak because the Fed has been told that any disclosure

How a rate-setting rule could have changed Fed policy

Some Republicans want the Federal Reserve to follow a rule in setting monetary policy. One example is the Taylor rule, which prescribes interest rate changes based on inflation and output.



◀ could jeopardize investigations by the Fed's inspector general and the Department of Justice. That response exasperates Representative Sean Duffy of Wisconsin, the Republican chairman of the oversight and investigations subcommittee of the Financial Services Committee. "Madame Chair," he told Yellen at her July 15 testimony, "it appears you are the one who is jeopardizing, or the Fed is the one who is jeopardizing, this investigation."

Under Majority Leader Mitch McConnell, the Senate is moving toward a vote on a financial regulation bill sponsored by Alabama Republican Richard Shelby, the Banking Committee chairman. It requires the Fed to disclose more about how it sets monetary policy, but doesn't require that it follow a rule. It's still unlikely to pass. But, says Cato's Calabria, "You have to lay the groundwork even if the probability of passage isn't high." —*Peter Coy and Matthew Philips*

The bottom line A strengthening economy hasn't protected the Federal Reserve from threats to its independence.

Growth

China Wants Silicon Valleys Everywhere

▶ Local officials are setting up special high-tech zones all over

▶ "Are they all likely to become major hubs of innovation? Most...will not"

"Ignite the innovative drive of hundreds of millions of people." That's what China's Premier Li Keqiang called on all levels of government to do in a March address. With its industrial complex losing steam, the country must rely on innovation, especially of the digital kind, for new sources of growth. "You can see there are two Chinas. One is the old China that is slowing down in growth; there's a new China that is driven by the Internet," says Hans Tung, managing partner at GGV Capital, a venture capital firm in Menlo Park, Calif. "You know they need to grow the new China to offset the slowing down of the old China."

The result of Li's speech and other similar messages from the central government is that municipalities across

China have designated areas in their towns and cities as special high-tech zones where entrepreneurs can enjoy the fastest Internet connections, government assistance in funding, and access to affordable software programmers from the closest university. Such zones can be found in many countries. What's remarkable about China's effort is its scale: As of March 2015, 129 high-tech zones had been approved by the State Council.

"Are they all likely to become major hubs of innovation or technology?" asks Gary Rieschel, founding managing partner at Qiming Venture Partners. He figures the U.S. has four such hubs: Boston, New York, San Francisco/Silicon Valley, and Seattle. "Maybe China will ultimately have eight," Rieschel says. "So most of them will not."

City officials in Changsha, capital of Hunan province, are doing their best to nurture their own Silicon Valley. Changsha's high-tech zone is 15 times the size of New York's Central Park. The city wants to lure companies that focus on new materials, software development, electronics manufacturing, and mobile apps.

Entrepreneurs who started out in Hunan have formed Hu Xiang Hui, meaning the Hunan Club, to promote Changsha's and the zone's advantages. The club's members include Hugo Shong, a well-known venture capitalist; Yao Jingbo, founder of classified ads website **58.com**; and Jeffrey Zeng, head of the venture capital unit of **Citic Capital Holdings**. "In the past you would see most of the venture capital deals coming from the big cities, but now you're seeing second- and third-tier cities providing great opportunities,"

"In the past you would see most of the venture capital deals coming from the big cities, but now you're seeing second- and third-tier cities providing great opportunities"

says Shong, a founding partner of **IDG Capital Partners**, which was an early investor in Tencent and Baidu. In the year since officials in Hunan reached out to Shong to help beef up the region's competitiveness, more than 500 companies have been founded in the high-tech zone and 10,000 new jobs added, Chen Songling, a deputy director at the economic and information department for the province, said at an investment forum in April.

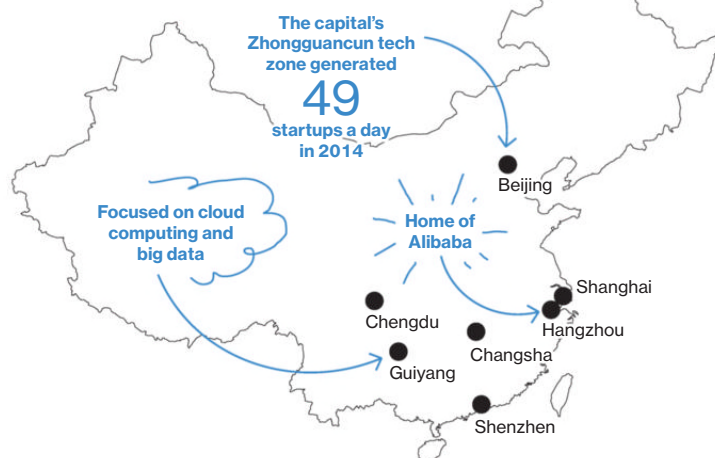
At dinner with the party secretary of Changsha during that forum, Shong said he suggested that the government take a more hands-off approach and not try to overregulate or manage these fledgling companies. Shong says he also told the party secretary that Changsha should play to its strengths. "Hunan has a foundation for entertainment content," he says. Hunan's television station has produced a top-ranking show in China. "If we can combine that with the Internet, it would be quite interesting."

While officials work to make cities such as Changsha innovation hubs, the entrepreneurial instincts at work in Beijing are stoked by huge sums of private-sector cash. With homegrown champions such as Baidu attracting top talent, Beijing's Zhongguancun high-tech district has since 2003 created the most software companies valued at more than \$1 billion each. Only the U.S. has created more, according to venture capital investor Atomico. The allure of Zhongguancun comes from the camaraderie that promotes brainstorming in the district's coffee shops and at the numerous forums that attract the city's brightest electronics innovators.

That's something Changsha doesn't yet have. Says 21-year-old

Let High-Tech Zones Bloom!

In an effort to channel Silicon Valley's entrepreneurial spirit, China has established 129 areas with high-speed Internet and subsidized startup costs. Seven of the most high-profile zones are located in major cities in the eastern and southern provinces.



Zhou Jieliang: “To be honest, the overall startup vibe in Hunan isn’t that great right now.” Zhou, a university student in Changsha who co-founded an online education platform there, says she spends more than half her time in Beijing, Hangzhou, and Shanghai. The contrast with Changsha is “quite stark,” she says. —*Lulu Chen and Dexter Roberts*

The bottom line Beijing’s Zhongguancun high-tech district is the closest thing China has to Silicon Valley.

Debt

Italy Leans While Greece Tumbles

- ▶ It’s deep in debt but has manufacturing and prudent banks
- ▶ The Greeks have “tourism and shipping and little else”

Viewed from Berlin or London, the financial woes of Italy and Greece can look dangerously similar. Both sit on mountains of public debt and suffer from double-digit unemployment. So why hasn’t Italy had to shutter banks, submit to austerity measures in return for emergency loans, and contemplate an exit from the euro?

For now Italy is chugging along, paying its debts and selling bonds. Its benchmark stock index is up 25 percent this year. It’s emerging from a record recession even as Greece enters a new slump after a brief rebound in 2014. Rome-based **Eni**, Europe’s No. 4 oil company, is pumping 1.7 million barrels per day globally and says output will keep rising. **Finmeccanica** sells helicopters to corporations and armed forces from the U.K. to China. **Carnival** cruise liners are made in **Fincantieri**’s Trieste shipyard. Italian luxury goods, from **Fendi** to **Ferrari**, are at the top of consumer shopping lists. Among European manufacturers, Italy trails only Germany in production.

The Greeks? They’ve got “tourism and shipping and little else,” says Marc Ostwald, a fixed income strategist at ADM Investor Service in London. Greek exports fell 7.5 percent in the first quarter, while Italy’s rose more than 3 percent. Tourism in Italy generated about €34 billion (\$37.1 billion) last year,

almost triple what it did in Greece.

With 60 million residents, Italy is more than five times as populous as Greece. History makes a difference, too. Rebuilding from World War II, Italy set off on the *Dolce Vita* boom years, popularizing the Vespa scooter and making a mark in international design. Nutella, a nut-based chocolate spread introduced after the war, had annual sales of €8.4 billion last year, making the Ferrero family one of Italy’s richest. Greece, by contrast, went from government by junta in the 1960s and 1970s to a republic run by a political elite and a bloated government in the 1980s. Cutting its civil service and pension costs down to an appropriate size lies at the heart of the struggle between Greece and Europe on economic reform.

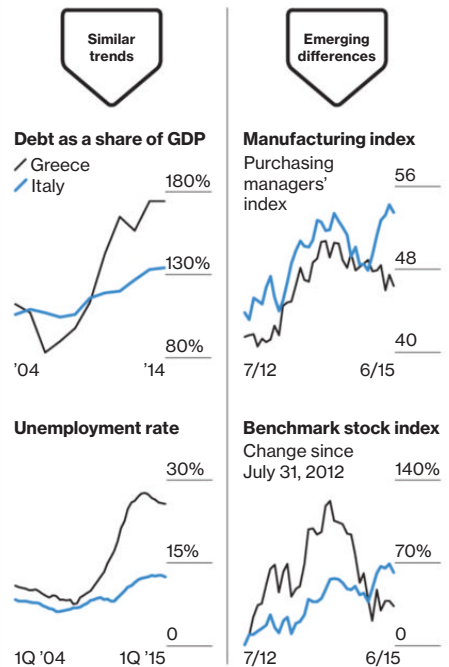
Italy’s strength as an industrial exporter has provided stability, helping the country build up gold reserves of \$90 billion—the world’s third-biggest stash after the U.S. and Germany and more than 20 times what Greece holds. Just a single Italian bank needed a public bailout after the 2008 crisis, even as dozens of lenders in northern Europe had to dip into state coffers to stay open.

Household debt as a proportion of gross domestic product is relatively low, about 45 percent, vs. 65 percent in Greece and about 57 percent in Germany. And Italy’s “stable real estate sector has never experienced boom-bust cycles like those in Spain and Ireland,” says Fabio Fois, European economist at Barclays in Milan.

The euro region’s institutions are doing everything they can to avoid a Greek tragedy in Italy. The European Central Bank is making sure member nations have as much cash as they need and that governments can borrow money at a sustainable rate. (The exception, of course, is Greece, which must get permission to borrow just to pay its debts.) Every month the ECB buys €60 billion of bonds from member states. That’s pushed yields to near historic lows, allowing Italy to borrow cheaply. “Italy faces a much lower insolvency risk,” says Raj Badiani, an

Italy Is Not Quite Greece

Both countries are saddled with debt and a high unemployment rate, but Italy’s strengthening manufacturing sector and stock market set it apart



economist at IHS Global Insight. Its “tax base is notably larger than its sovereign debt costs, unlike Greece.”

Italy may yet become another Greece. Aside from the recent uptick in growth, its numbers are grim. The global financial crisis of 2008-09, followed by the euro debt crisis, triggered the deepest and longest recessions in Italy’s postwar history. Its €2.3 trillion debt, more than 132 percent of GDP, is second only to Greece in the euro area. Italy has lost a quarter of its industrial output, and GDP has contracted by 9 percent since 2007. As a member of the euro zone, Italy can’t counter falling foreign demand by devaluing its currency, as it often did when the lira was in use. Unemployment is 12.5 percent, and 45 percent among youth—many of whom flee abroad. “Some of my best pupils, who speak English and other languages, have had to move to the U.K. or Germany to find jobs and a better future,” says Ivo Pezzuto, who teaches economics at Università Cattolica in Milan.

Prime Minister Matteo Renzi, 40, Italy’s youngest leader since Benito Mussolini, has pushed through labor market reforms that will make it easier to hire and fire people and

◀ presumably drive down manufacturing costs. The downside is that if the jobless rate spikes and workers earn less, Italians may cut spending or start racking up debt. In Turin, where the Agnelli family founded the industrial giant **Fiat** in 1899, unemployment is above 12 percent, double the rate a decade ago. Many locals blame the costly euro for pushing car-making jobs to Eastern Europe and Mexico, where Fiat makes some of its pint-size 500s.

In the capital, Rome seems to be crumbling around its ancient ruins. Unable to pay down debt of €1.5 billion, the municipality has received repeated bailouts from the national government. And the city has earned a new nickname: “Mafia Capitale.” Prosecutors say a group of politicians, officials, and mobsters skimmed money from the public budget. Trash piles up on the cobblestones, and it’s a minor miracle to step aboard a city bus that’s air-conditioned. Want to see a crime in progress? Just stand on the subway platform under the Roma Termini train station, and you’ll spot pickpockets at work within minutes.

Yes, it’s that bad. But at least it isn’t Greece. —*Lorenzo Totaro and Vernon Silver*

The bottom line Italy has managed to avoid Greece’s fate because of its stronger economy and ECB efforts to keep the euro zone stable.

Government

A Foreign Reformer Takes on Odessa

▶ Georgia’s ex-president wants to end a culture of corruption

▶ “It was a genius decision, because he is truly independent”

Once a top lawyer at Microsoft and now a government official in Ukraine, Sascha Borovik says politics there is like a Mexican standoff. Corrupt politicians and oligarchs point guns at each other, he says, “then we enter, unarmed, but making a lot of noise. The whole dynamic changes abruptly.” By “we” he means the team brought in by **Mikheil Saakashvili**, who was appointed governor of the Odessa region by President Petro Poroshenko on May 30.



Bathers, and a bride posing for pictures, at Odessa’s Langeron Beach

As president of Georgia from 2004 to 2013, Saakashvili carried out the deepest institutional reforms seen in the former Soviet Union, cleaning up the police and liberalizing the economy. The final years of his presidency were clouded by Georgia’s defeat in its brief 2008 war with Russia as well as by criticism that he was turning toward authoritarianism. A naturalized Ukrainian, he rules a province of 2.3 million people (which includes the city as well), one of Ukraine’s most populous, criminalized, and politically unstable regions.

Last year, Odessa province was on the verge of a pro-Russian rebellion like the one that led to war in Eastern Ukraine. The struggle between loyalists and separatists ended abruptly on May 2, 2014, when 48 people died in violent clashes and a deadly blaze in the local trade unions building, where pro-Russian activists had barricaded themselves. Separatism in Odessa has largely evaporated because of the shock of that incident

and the carnage in Eastern Ukraine.

The appointment of Saakashvili, a sworn enemy of Russian president Vladimir Putin, has been received by the locals with surprising enthusiasm. “Everyone just instantly fell in love. It was a genius decision, because he is truly independent without any vested interests locally,” says Andrey Stavnitser, chief executive officer of TIS, the largest dry cargo port in the Odessa region.

Ukraine—and the Odessa region in particular—is plagued by corruption and hobbled by impenetrable bureaucracy. The country is No. 142 on Transparency International’s

Corruption Perceptions Index, lower even than Russia, No. 136. Saakashvili’s native Georgia is far above at No. 50, the result of reforms he wants to replicate in Odessa.

Changes will begin with government services. He wants to streamline and automate the process for obtaining official papers. Odessans sometimes have to queue for days and are





Far from the war zone, Odessa is Ukraine's busiest port



Models mug for selfies at Ukrainian Fashion Week in Odessa

bounced from one office to another, facing extortion by officials every step of the way. Saakashvili says the established local bribe price for foreign businessmen to get residency permits stands at \$7,000. He pledges to eliminate the practice.

The biggest challenge in Odessa, Ukraine's largest port, is reform of the customs service. Saakashvili says the government loses as much as \$1 billion a year in unpaid duties at Odessa's three main ports as exporters and importers choose to smuggle goods rather than go through the corrupt customs service.

Customs officials have many ways to wring money illegally from shippers who have to pay duties. They often treat shipments of ordinary goods as luxury items, which are subject to much higher tariffs. "They call it making the client cough," says a former high-ranking customs official. The actual bribe takers keep only a small share of the take, he says, with the rest going to superiors. Saakashvili says he will automate the department and sack pretty much all the staff. In their place, he will hire "young people with model looks" so passing through customs becomes a pleasant experience.

The aim of the reform, says Borovik, who is Saakashvili's top assistant, is to "completely change economic practices in a region where a large part of the population is dependent on smuggling." Saakashvili hopes to remove bottlenecks set up to generate bribes and to lower duties so that complying with the law would be more cost-effective than disobeying it.

Saakashvili is bringing in highflying foreigners like himself. On July 17 he introduced his vice governor for welfare issues, Maria Gaidar, a Russian opposition figure and the daughter of Yegor Gaidar, the late reformist prime minister of Russia. Like Borovik, she's a graduate of Harvard, one of several on the team. Other major U.S. schools, such as MIT, are also represented. Former members of Saakashvili's Georgian government are presiding over major police reform in both the Odessa region and Ukraine overall. "Our doctrine vis-à-vis Ukraine is this:

Guys, we need fast reforms, so either you conduct them at our pace or you allow us to move at our own," says Borovik.

Saakashvili appears to be betting that successful reform in Odessa and Ukraine could become a weapon against his old nemesis, Putin. At

the appointment of Gaidar, he spoke of her to potential investors, saying, "The fact that such a prominent Russian politician is joining us means we are invincible." Gaidar understands there is a greater goal involved as well. "If we succeed here, we'll succeed in Russia, too," she said in reply.

Investors are enthusiastic but cautious. Vladimir Matias, managing director of Goetzpartners, a financial consultant in Moscow, says, "there are many people who no longer want to invest in Russia. The more stable Ukraine becomes, the more Russian money will start accumulating in Ukraine." He says, however, he's not ready to invest in Ukraine quite yet.

—Leonid Ragozin

The bottom line Mikheil Saakashvili has moved from Georgia to Ukraine to rule and reform the province of Odessa.

July 27, 2015

THE MUTANT PATH TO **POWERFUL DRUGS!**



search of drugs for some of the industry's biggest, most lucrative markets.

Their genes have caused the two men enormous suffering. Pete's parents first realized something was wrong when, as a teething baby, their son almost chewed off his tongue. "That was a giant red flag," says Pete, now 34 and living in Kelso, Wash. It took doctors months to figure out he had congenital insensitivity to pain, caused by two different mutations, one inherited from each parent. On their own, the single mutations were benign; combined, they were harmful.

Dreyer, who lives in Johannesburg, was 21 months old when his parents noticed a sudden facial paralysis. Doctors first diagnosed him with palsy. Then X-rays revealed excessive bone formation in his skull, which led to a diagnosis of sclerosteosis. Nobody in Dreyer's family had the disorder; his parents both carried a single mutation, which Dreyer inherited.

Dreyer and Pete are "a gift from nature," says Andreas Grauer, global development lead for the osteoporosis drug Amgen is creating. "It is our obligation to turn it into something useful."

What's good for patients is also good for business. The painkiller market alone is worth \$18 billion a year. The industry is pressing ahead with research into genetic irregularities. The U.S. Food and Drug Administration is expected to approve a cholesterol-lowering treatment on July 24 from **Sanofi** and **Regeneron Pharmaceuticals** based on the rare gene mutation of an aerobics instructor with astoundingly low cholesterol levels. Amgen has a similar cholesterol drug, based on the same discovery, and expects U.S. approval in August. The drugs can lower cholesterol when statins alone don't work. They are estimated to cost as much as \$12,000 per patient per year and bring in more than \$1 billion annually.

Drugmakers are also investing in acquisitions and partnerships to get their hands on genetic information that could lead to more drugs. Amgen bought an Icelandic biotechnology company, DeCode Genetics, for \$415 million in 2012, to acquire its massive database on more than half of Iceland's adult population. Genentech is collaborating with Silicon Valley startup **23andMe**, which

► **Rare deviations in DNA may hold the key to billions in profit**

► **Genetic outliers are "a gift from nature"**

Steven Pete can put his hand on a hot stove or step on a piece of glass and not feel a thing, all because of a quirk in his genes. Only a few dozen people in the world share Pete's congenital insensitivity to pain. Drug companies see riches in his rare mutation. They also have their eye on people like Timothy Dreyer, 25, who has bones so dense he

could walk away from accidents that would leave others with broken limbs. About 100 people have sclerosteosis, Dreyer's condition.

Both men's apparent superpowers come from exceedingly uncommon deviations in their DNA. They are genetic outliers, coveted by drug companies **Amgen**, **Genentech**, and others in



Digital price tags give brick-and-mortar stores a Web edge 22

Now Ball preserves space images 23

Pink for girls, blue for boys—so passé 23

Briefs: Cheaters hacked; PayPal's big payoff 24

"Before a lot of us participated in these projects, very little about pain itself was known."
—Steven Pete

has sold its \$99 DNA spit kits to 1 million people who want to find out more about their health and family history—more than 80 percent have agreed to have their data used for research. The Genentech partnership will study the genetic underpinnings of Parkinson's disease. And Regeneron has signed a deal with Pennsylvania's **Geisinger Health System** to sequence the genes of more than 100,000 volunteers.

Propelling this trend is the plummeting cost of gene sequencing. It took \$3 billion and 13 years, from 1990 to 2003, to sequence the first human genome. The cost today is as low as \$1,000 a patient, making it practical to sequence large numbers of people and discover relationships between genes and symptoms.

The researchers who study outliers are often the first to realize the potential power behind a mutation. In 2010, Socrates Papapoulos, a professor of medicine at the Leiden University Medical Center in the Netherlands, visited an isolated Dutch community where much of the population had overgrown skulls and abnormally large bones. At a town meeting, he asked if anyone had been in a major car accident. One man raised his hand. "He said, 'I was crossing the street with my brother, and a Mercedes was coming, and I didn't have time to move,'" Papapoulos says. "And I said, 'What happened?' And he said, 'You should have seen the Mercedes.'"

MEANWHILE...

YOUR BLOOD PRESSURE IS AMAZING!



Amgen realized that if researchers could mimic the effects of the genetic mutation, they could encourage bone growth strong enough to counter osteoporosis. People with sclerosteosis lack a protein that acts as a brake on bone growth. Without that protein, bones grow abnormally thick. It stood to reason, researchers thought, that a drug that could block the protein in patients with osteoporosis would encourage bone regrowth.

Amgen's scientists created hundreds of antibodies that they tested to determine which might be able to get in the way of the protein. It took them three and a half years of research before they were able to identify the best antibody. Then NASA came calling.

In 2010 the space agency, preparing for its final space shuttle mission, was looking for promising research projects. It invited Amgen to test the drug's ability to stop the loss of bone mass often seen during spaceflight. Amgen sent 30 mice on the *Atlantis* shuttle. Half got the drug, romosozumab. After 13 days, the injected mice had gained bone mineral density as the control group's bones weakened.

Amgen has run two human trials since 2006. It is conducting two final-stage trials, with the first batch of results expected in early 2016. If the drug works as well as promised, it could bring Amgen \$1 billion to \$2 billion in sales per year, says Cowen Group analyst Eric Schmidt.

Unlike sclerosteosis patients, people such as Pete who don't feel pain have no outward physical features that give them away. Instead, researchers have stumbled upon them more or less by chance. A research article on families in Pakistan came after the discovery of a 10-year-old boy who as a street performer stabbed himself with knives and walked on burning coals.

Xenon Pharmaceuticals, a small Canadian biotech, started studying more than a decade ago families who showed similar pain-free traits and tracked down the gene responsible, which regulates a pathway in the body called the Nav 1.7 sodium ion channel. With just a few dozen employees, Xenon turned for development help to Genentech, which is owned by Roche, and its 1,200

research and development scientists.

Genentech was excited about the Nav 1.7 channel because the mutation only takes away the ability to feel pain. "You want to just prevent pain and not cause a bunch of other problems," says Morgan Sheng, Genentech's vice president for neuroscience. The only other effect typically seen is a loss of the sense of smell.

The promise of the sodium ion channel is to create an entirely new

class of painkiller. Options on the market are all problematic. Opioids, such as morphine, are addictive, while nonsteroidal anti-inflammatory drugs, such as ibuprofen, are ineffective with severe pain and can cause gastrointestinal side effects including bleeding. Genentech is still in the earliest stage of clinical trials, and it could take more than five years before a drug is released.

The Quest for Rare Genes

Amgen

The biotech in 2012 got genetic data on 160,000 Icelanders via its \$415 million buyout of DeCode Genetics

Calico

The Google-backed company, searching for longevity genes, has teamed with Ancestry.com, which has collected millions of public family trees and more than 1 million genetic samples

Regeneron

Working with Geisinger Health System to sequence genes of 100,000 volunteers

23andMe

The genetic-testing pioneer has genotyped 1 million customers; it has deals with more than 10 drugmakers, including Pfizer and Genentech

no profit motive to find treatments for their conditions. The market is too small, even though their suffering is real. Pete's left leg is permanently damaged from years of injuries he couldn't feel, and he lives with the anxiety that he could overlook a severe illness, such as appendicitis, whose major symptom is pain. He regularly participates in research studies and says he wants to contribute to scientists' knowledge to help them develop better painkillers. "Before a lot of us participated in these projects, very little about pain itself was known," he says.

Excessive bone growth in Dreyer's skull has led to multiple operations to relieve pressure on cranial nerves and the brain, though ultimately the surgeries were unable to prevent hearing loss. Dreyer, a Ph.D. student in

◀ paraclinical science at the University of Pretoria, isn't waiting for Big Pharma to come to his rescue. For his Ph.D. project, he's researching treatments for his own disease and hopes to raise 2 million rand (\$161,000) to fund his work. "There are thousands of people suffering from osteoporosis, so developing a treatment for them is great," he says. "That being said, I do think it would be nice if they could help us out now that they understand our disease and are able to use it for their treatments." —*Caroline Chen*

The bottom line Genentech and Amgen are studying rare gene mutations to create blockbuster drugs for pain and osteoporosis.

Retail

Stores Try Fixed Prices That Aren't So Fixed

▶ Merchants add digital displays that allow quicker price updates

▶ In a year or two, "you'll see a lot more retailers rolling them out"

Nebraska Furniture Mart used to dispatch an army of employees each morning to update printed price labels throughout its stores, a time-consuming effort to maintain its pledge to offer the lowest prices on televisions, dishwashers, sofas, and flooring. But following a big investment in digital-price displays that began in 2011, a single worker can now quickly update the chain's prices on thousands of products in all four of its locations to beat the latest offers from **Home Depot**, **Sears**, and other rivals.

"If we have a TV for \$1,200 and Amazon has it for \$900, customers are going to say, 'What the heck, your prices are not the lowest,'" says David Bash, chief information officer at Nebraska Furniture Mart, a **Berkshire Hathaway**-owned chain that has stores in Nebraska, Kansas, Iowa, and Texas. "These electronic shelf tags are not just here to look pretty. They're here to make sure you get the best deal."

A small but growing number of U.S. retailers are investing in digital displays that easily accommodate frequent changes, all the better to compete with online merchants for smartphone-toting shoppers who scan **Amazon.com** and

other websites to find the best deals. **Pricer**, the Stockholm-based market leader in digital-pricing displays, says 110 million electronic shelf labels have been installed worldwide. But the technology is still new to most U.S. retailers. A supplier to big European retailers such as **Carrefour** and **Groupe Auchan**, Pricer saw its U.S. sales almost triple, to \$11.6 million, in the first quarter of 2015 from the year before. The U.S. generated about 8 percent of its quarterly revenue, up from 4 percent a year earlier. American companies using at least some form of digital price tags range from small fry like Nebraska Furniture Mart to family department store **Kohl's**, which has installed the devices in its almost 1,200 stores.

Altierre, the San Jose-based company that produced the displays used in Kohl's stores, sells low-power, long-range wireless transmission gear, sensors, and software to control thousands of battery-powered pricing displays on shelves or display racks throughout a building.

Besides enabling retailers to quickly change prices, Pricer's digital displays can be integrated with smartphone apps and GPS systems to lead customers to items. The system can even trigger the shelf price display to flash as the customer approaches. Pricer also markets the gear to retailers offering so-called click-and-collect services, where members of the staff walk through a store to gather items customers ordered online for in-store pickup.

Going digital isn't cheap. While shelf displays start at about \$5 each, the cost

of outfitting a single store can top six figures for big-box retailers that carry tens of thousands of products in each location. "This is not an inexpensive solution," says Gary Glaser, who directs U.S. sales for Pricer. Still, "over the next year or two, you'll see a lot more retailers rolling them out."

One reason: The explosion of online retailing has shortened the shelf life of prices in brick-and-mortar stores. Amazon, **EBay**, and other Web marketplaces let shoppers quickly call up side-by-side prices for the same product from multiple merchants. So rather than sticking with set prices that give them the profit margins they want, retailers increasingly have to tweak pricing to match—or at least approach—their rivals that sell via the Web. Some merchants are also using price-changing algorithms to beat online competitors for top search placement on comparative retail websites.

"The gap between online prices and in-store prices is not going to hold," says Victor Rosenman, chief executive officer of **Feedvisor**, which uses algorithms to help online merchants set prices. "We will get closer to a perfect market condition where the seller doesn't make much profit and the buyer gets a good price."

Pricer's biggest U.S. customer is the Department of Defense. The DOD started experimenting with electronic shelf labels almost 20 years ago and recently finished installing them in all 180 military commissaries in the country, says Kevin Robinson, a spokesman for the Defense Commissary Agency. The displays eliminate pricing discrepancies at the counter, reducing customer complaints, returns, and cancellations at checkout, he says.

"With electronic shelf labels, stores can shift employees to customer service during peak sales periods from the labor-intensive chore of posting thousands of price changes, usually done by hand at night," Robinson says. "Large stores can average 5,000 to 6,000 price changes per month. The system can bring price changes to the floor much faster—at the rate of 3,000 per hour."

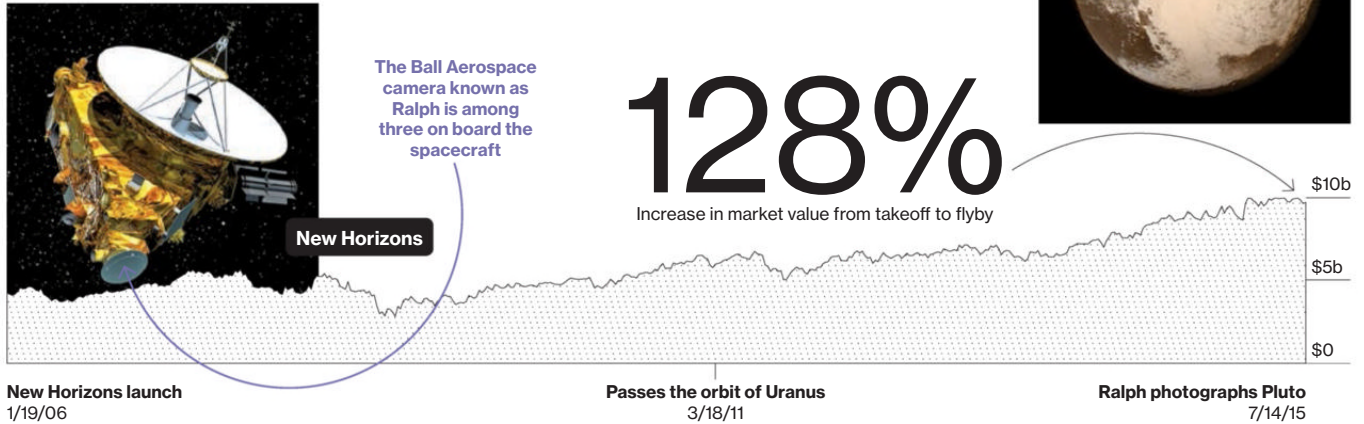
Kohl's started using electronic price displays in 2010 and added them to all its stores by the end of 2012. The retailer puts the displays in prominent places where items are grouped—on top of a rack of sport coats, for instance, rather than on individual items. Their use has helped Kohl's save on payroll and boost profit margins.



Price displays at a Nebraska Furniture Mart in a Dallas suburb

Aerospace Twice the Company It Left Behind

In the decade since NASA launched the New Horizons spacecraft toward Pluto, Ball, whose aerospace unit built one of the craft's cameras, has more than doubled in size. Aerospace accounts for only a small portion of Ball's business; most of the growth came from its metal-packaging divisions. —Mark Glassman



DATA COMPILED BY BLOOMBERG

Still, digital-pricing displays can't solve all brick-and-mortar price problems. Nebraska Furniture Mart limits changes to one per day before the store opens, with some exceptions, so customers don't grab an item off the shelf and have the price go up or down by the time they get to the cash register, Bash says. "I know Amazon makes price changes all day long, but that would drive our customers nuts," he says. "At 10 a.m., when the store opens, we are the lowest price in our categories. At 10:05 we can't guarantee that."

—Spencer Soper, with Lindsey Rupp

The bottom line U.S. sales of digital-pricing displays from Sweden's Pricer almost tripled in 2015's first quarter from the year before.

Apparel

Think Pink for Girls and Boys

► About a dozen startups are selling gender-neutral kids clothing

► "She started telling me, 'I want a ninja on my shirt'"

As a toddler, Jaya Iyer's daughter, Swaha, was fascinated by Saturn and its bright, colorful rings. When the time came last November to plan the girl's third birthday party, Iyer decided on a space theme and went shopping

for an outfit for Swaha to wear. There were plenty of boys' tops with space graphics but nothing for girls. Then, Swaha had a new interest. "She started telling me, 'I want a ninja on my shirt,'" Iyer says. It was time to act.

Svaha (the pronunciation of Iyer's daughter's name), a gender-neutral line of kids clothing, was hatched in late January and goes on sale online in August. It consists mostly of T-shirts with nontraditional graphics and colors—a grinning green stegosaurus with polka dots or an astronaut planting an American flag on the moon on a hot-pink background.

Iyer, who has a Ph.D. in fashion merchandising and was a senior apparel buyer for online retailer ThinkGeek, designed the shirts and hired a graphic artist to digitize her sketches. Because U.S.-based manufacturers prefer bigger orders, she chose a manufacturer in India.

Svaha is one of about a dozen U.S. companies to emerge over the last few years to provide kids, and parents sensitive to gender stereotypes, with options that don't slot children into the traditional boy-girl dichotomy. **BuddingSTEM**, founded by Seattle-area moms Jennifer Muhm and Malorie Catchpole, sells clothing for girls interested in science—dresses with dinosaur prints and T-shirts emblazoned with stars and rockets. **Quirkie Kids**, another Seattle-based business, sells clothes appropriate for children of both genders.

The ventures are born of similar experiences—an exasperated parent with a child who wants something that isn't available at the bigger, mainstream kids chains such as **Children's Place** and **Gymboree**. Children's apparel sold in those stores and at other retailers represents a \$33 billion market in the U.S., according to data from researcher NPD

Group. Parents spend an average \$1,000 a year per child on clothes, according to the U.S. Department of Agriculture. Children's Place and Gymboree declined to comment.

The startups are getting off the ground with money raised from crowdfunding campaigns, ranging from \$50,000 to \$215,000.

Those numbers suggest the businesses aren't likely to grab too big a piece of the market. Caletha Crawford, a children's wear consultant and professor at Parsons New School for Design, says there's room for new ideas and new themes in children's wear, but "it's not enough to just have a cute line."

As a bellwether of parents' attitudes about gender, the startups say a lot, says Lise Eliot, a neuroscientist at the Chicago Medical School at Rosalind Franklin University and author of *Pink Brain, Blue Brain: How Small Differences Grow Into Troublesome Gaps—and What We Can Do About It*. A growing number of parents of young children are becoming more comfortable with breaking down stereotypes, ►



Briefs

By Jennifer Chaussee

Public Affairs

● ● AshleyMadison.com, the online dating service for people who are married and in relationships, was invaded by hackers who said they'd collected the names, addresses, and fantasies of millions of the site's users and planned to publicize the data. The hack came as Toronto-based *Avid Life Media*, which runs Ashley Madison, prepared for an initial public offering in London this year. ● ● Citigroup, the world's largest credit card lender, was ordered by federal regulators to refund customers \$700 million to settle allegations that it misled them about add-on products and fees. Citibank, which must also pay \$70 million in fines to the Consumer Financial Protection Bureau and the Office of the Comptroller of the Currency, neither admitted nor denied wrongdoing. It said it discontinued the products and will pay the penalties in full. ● ● The shares of *PayPal Holdings* rose as much as 11 percent on July 20 in their debut after its spinoff from EBay.

Decline in global sales volume of Diet Coke during **Coca-Cola's** second quarter. Regular Coca-Cola sales rose 1 percent, while Coca-Cola Zero sales climbed 6 percent.

7%

The online payment company opened with a market value almost 1.4 times that of EBay. ● ● Toshiba President Hisao Tanaka quit after investigators found the Japanese

electronics company inflated earnings by at least \$1.2 billion. On his way out, Tanaka said Toshiba needs "renewal of the management structure" and bowed in apology. ● ● Uber lost a bid to dismiss a lawsuit claiming it violates consumer protection laws by sending unwanted text messages to prospective drivers who'd started, but not completed, online job applications with the service. Some recipients say they didn't consent to Uber using phone numbers on the applications. A federal judge allowed the lawsuit to proceed. Uber denies the allegations.

◀ such as dressing their boys in pink and their girls in overalls. "We have to appreciate that gender's not a binary," Eliot says. "There's a whole spectrum of traits that we associate with masculinity and femininity."

Sharon Choksi co-founded **Girls Will**

Be, a line of girls' clothes based in Austin. Her daughter, Maya, now 10, never liked sparkles or colors typically worn by girls, Choksi says, so she shopped for Maya in the boys' section. But Choksi worried that as Maya grew up, boy/girl labels would upset her. "When are the big retailers going to wake up and realize that not all girls are the same and not all boys are the same?" she asks.

Large retailers are focused on quantity, says Patty Leto, senior vice president for children's wear at the Doneger Group, a company that monitors trends. "When retailers look at the big picture and where the volume is going to be, they're generally going to go after what's traditionally been strong businesses," she says. "Pink is always going to sell for girls, and blue is always going to sell for boys, no matter what is going on out there with small labels." In the end, Leto says, "the consumer is the ultimate voter here."

In 2014, **Lands' End** found itself the target of angry criticism and comments from shoppers when New Jersey mom Lisa Ryder wrote a letter decrying gender stereotypes in its kids' clothing selection. As she described in her letter, which she posted to Facebook, her daughter loved shirts with planets and dinosaurs, though they were clearly marked for boys. When it was suggested to Ryder by a Facebook commenter that she simply purchase a boys' shirt, she responded with vigor. "Simply buying my daughter one of your 'boy shirts' is not the answer because it perpetuates the idea that science is a boy thing that she happens to be participating in." In response to the outcry, Lands' End decided to sell science-themed shirts for girls. —Kim Bhasin

The bottom line Children's apparel represents a \$33 billion market; many kids' clothing startups say more options are needed.



Microsoft's new wallpapers feature a ninja cat riding a bacon-toting narwhal. The images were created as gifts for volunteers who tested the Microsoft 10 operating system.

CEO Wisdom

"We may be performing at the top of the heap, but if someone comes in at a lower price, our customer will move."

Marilyn Hewson, CEO of Lockheed Martin, on the decision to sell the majority of the company's IT business





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The Most Important Bank in America

Accused of corruption? You might want to go to court 29

Spider van, spider van, does whatever a DOT can 30



► Republican presidential candidates love to stash their money at a Virginia bank with one branch

► “It’s...the super PACs. It’s not even a presidential year yet, and they’re out there raising furiously”

Chain Bridge Bank’s single location is next to a wine store and a cafe on the ground floor of a luxury condo building in suburban McLean, Va., about a half-hour outside downtown Washington. It looks like any small-town bank. Tellers keep bowls of candy at their windows, and staff members talk to customers about no-fee checking accounts. But right now, Chain Bridge, which has about 40 employees, is responsible for more of the hundreds of millions of dollars flooding into the 2016 presidential race than any other bank in the country.

According to the most recent Federal Election Commission filings, Chain Bridge is the sole bank serving Jeb Bush’s presidential campaign, which reported raising \$11.4 million as of June 30, and his allied super PAC, Right to Rise, which

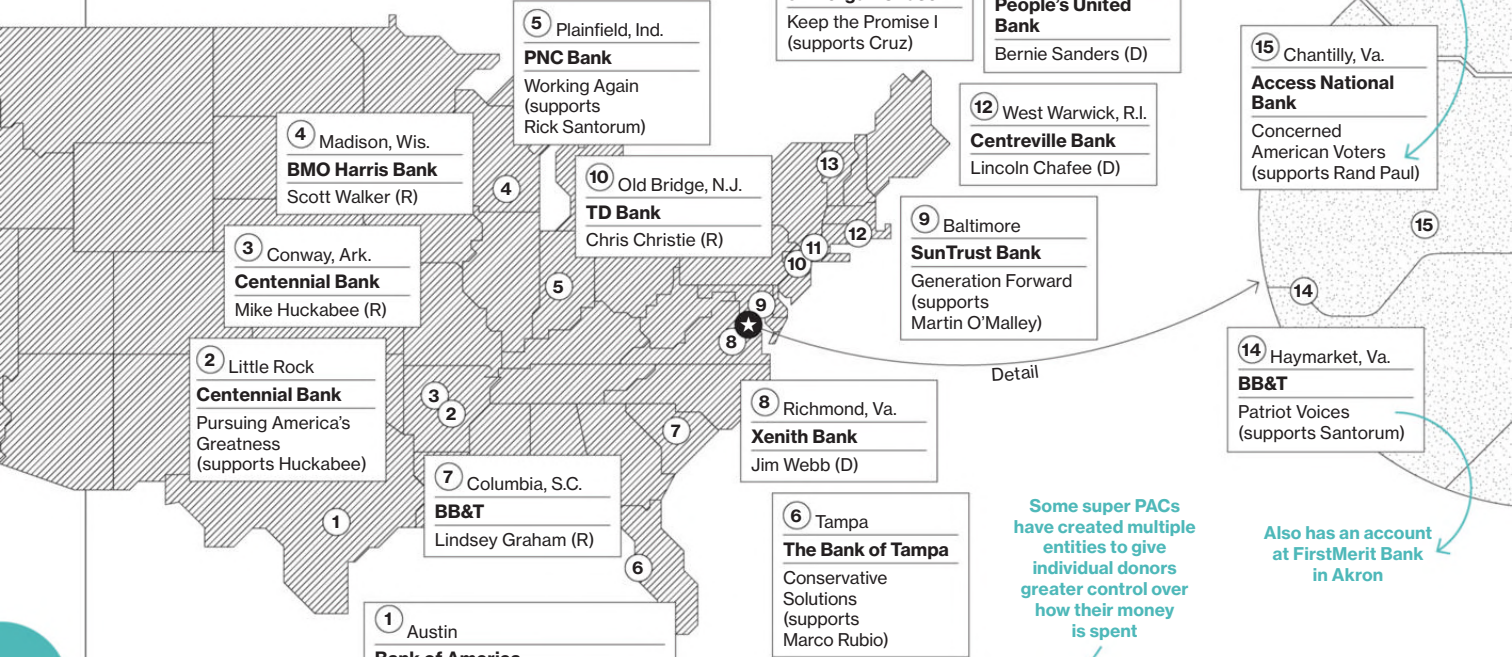
says it’s raised \$103 million. Donald Trump’s campaign banks at Chain Bridge, and it’s listed as the primary financial institution for the campaigns of Kentucky Senator Rand Paul and former Texas Governor Rick Perry. It’s also the only bank used by super PACs supporting neurosurgeon and author Ben Carson, South Carolina Senator Lindsey Graham, former technology executive Carly Fiorina, Louisiana Governor Bobby Jindal, and Wisconsin Governor Scott Walker, all Republicans.

Founded in 2007, Chain Bridge served John McCain’s presidential campaign in 2008 and Mitt Romney’s in 2012. House Speaker John Boehner keeps fundraising accounts there; so does the Republican National Committee. It’s also served political action committees for **Altria Group**, the National Association of

Convenience Stores, and the Outdoor Advertising Association of America. “The largest issue that we would always have with people is that they’d be like, ‘Why would we use this Podunk little bank in McLean, Virginia?’” says Bradley Crate, founder and president of the consulting firm Red Curve Solutions, who was Romney’s chief financial officer in 2012. He routinely refers clients to the bank, including Trump and Florida Senator Marco Rubio, whose Senate PAC banks at Chain Bridge. The bank offers services tailored to the idiosyncrasies of campaigns, which deposit and then spend enormous sums quickly, with no credit history to lean on. “I know I can call my contacts at Chain Bridge Bank and have an account open in, like, 15 minutes,” Crate says. “If you go to a much larger bank, you have ►

Better Than a Piggy Bank

Presidential candidates and their allied super PACs have raised more than \$382 million so far this year, securing their war chests in these institutions:



Clinton has another campaign account at Bank of America in Washington

Super PAC names can't refer to specific candidates

Some super PACs have created multiple entities to give individual donors greater control over how their money is spent

Also has an account at FirstMerit Bank in Akron

◀ a bureaucracy you have to deal with.”

The bank requires employees to list cell phone numbers on their business cards so clients can reach them after hours. It greenlights credit cards immediately for campaign staffers scattered across the country without waiting for credit checks, and it lets campaigns make large wire transfers as soon as their accounts are open. It will also send and receive wire transfers until the Federal Reserve window closes, usually around 5 p.m.—more than two hours later than most banks. That extra time can make a difference. “If you’re a presidential campaign and you need to be up on the air in Iowa tonight, then you need your wire to go to television stations in Des Moines this afternoon,” says Peter Fitzgerald, the bank’s founder and chairman. “That’s a big deal for campaigns.”

Fitzgerald knows that from experience. A Republican, he was elected to the Illinois state senate in 1992 and to the U.S. Senate in 1998. He declined to run for a second term, and in 2004 his seat was won by Barack Obama. Fitzgerald, the scion of an Illinois banking family, remained in the D.C. area and opened

Chain Bridge—named for a nearby Potomac River crossing—with \$18.2 million in capital, about half of it from outside investors and half from his family wealth.

Chain Bridge initially focused on plain-vanilla customers, building deposits and making safe loans. Its shift to serving campaigns was an accidental byproduct of that cautious strategy. As the financial crisis developed in the summer of 2008, and larger banks showed signs of distress, compliance consultants working for McCain began looking for a haven for his campaign cash. The cash was then with Wachovia, which was having trouble borrowing enough money to fund daily operations—a problem for the campaign, which had to be able to withdraw millions on short notice to buy ads or pay canvassers.

McCain had been friendly with Fitzgerald in the Senate, and his team looked at Chain Bridge as an alternative. The bank was small, with just \$62 million in deposits, but solid: It had no subprime mortgages on its books and didn’t rely on borrowing to fund its operations. The campaign made the switch. By October, Chain Bridge’s deposits had doubled to \$123 million, according to FDIC filings.

“It really is by happenstance that it all started,” Fitzgerald says.

Other banks have made inroads into the campaign market. BB&T, a Southeastern regional bank with headquarters in Winston-Salem, N.C., holds campaign accounts for Texas Senator Ted Cruz, former New York Governor George Pataki, Carson, Fiorina, Graham, and Rubio—all Republicans. (Its former president, John Allison, became president of the libertarian Cato Institute.) Some Democratic candidates also favor small banks—Vermont Senator Bernie Sanders is at the **People’s United Bank** in Burlington, Vt.; former Secretary of State Hillary Clinton and former Maryland Governor Martin O’Malley have accounts at **Amalgamated Bank**, founded in 1923 by the Amalgamated Clothing Workers of America in New York. The largest majority union-owned bank in the U.S., it also does business with the Democratic National Committee and other partisan groups.

No bank is as dependent on political business as Chain Bridge. Its deposits tend to swell in election years and dissipate as soon as ballots are cast. Its 2013 annual report made reference to the phenomenon to explain one reason its earnings fell 3 percent that year: “Average earning assets in

Chain Bridge Bank

1Q 2015 deposits:

\$369m

Jeb Bush (R)
Right to Rise USA
(supports Bush)

One Vote
(supports Carson)

CARLY for America
(supports Fiorina)

Security Is Strength
(supports Graham)

Believe Again
(supports Jindal)

Rand Paul (R)
Rick Perry (R)

Patriot Voices
(supports Santorum)

Donald Trump (R)
Unintimidated
(supports Walker)

Conservative,
Authentic,
Responsive
Leadership for
You and
for America

Also has an account
at PlainsCapital
Bank in Austin

Also banks at
United Bank in
Hagerstown, Md.

17 Washington
Amalgamated Bank
Correct the Record
(supports Clinton)
Martin O'Malley (D)
Bank of America
Priorities USA Action
(supports Clinton)

**Priorities USA
Action** also banks
at National Capital
Bank, EagleBank, and
Citibank in Washington

18 Alexandria, Va.
BB&T

Marco Rubio (R)
We the People,
Not Washington
(supports Pataki)

EagleBank
America Leads
(supports Christie)
PNC Bank
Rick Santorum (R)

McLean, Va.

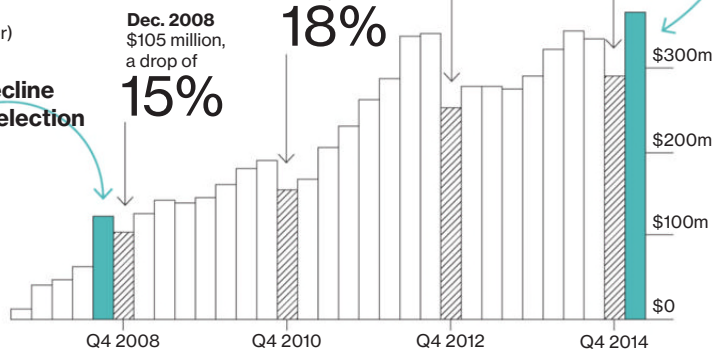
16 Arlington, Va.

BB&T
Ted Cruz (R)
Ben Carson (R)
Carly Fiorina (R)

Has a second account
at Bank of America
in Alexandria, Va.

Deposits decline
after every election

Pioneer: John
McCain transferred
funds from Wachovia
to Chain Bridge
in 2008, increasing
its deposits
98%



DATA: FEC, FDIC, BLOOMBERG

2012 were inflated
due to seasonal
deposit balances."

The bank's recovery comes earlier and earlier with each campaign cycle. In the fourth quarter of 2014, deposits fell 13 percent. By March the bank had more deposits and had grown larger by assets than at any point in its history. "It's the rise of the super PACs," says Fitzgerald, who was one of only a dozen Senate Republicans to vote in favor of McCain's 2002 campaign finance reform. Co-authored with former Wisconsin Democratic Senator Russ Feingold, the legislation barred corporations and wealthy individuals from making large contributions to party committees.

The Supreme Court upheld the McCain-Feingold law with its 2010 *Citizens United* ruling, which allowed unlimited donations to super PACs, as long as they don't coordinate with candidates. "It's not even a presidential year yet, and they're out there raising furiously," Fitzgerald says. Republican candidates and outside groups raised more than \$293 million in the first half of 2015. That doesn't include figures for all super PACs, which have until the end of July to report their fundraising totals, or most nonprofit issue-advocacy entities, which don't have to reveal fundraising at all.

Chain Bridge reported \$369 million in deposits at the end of the first quarter of 2015. That includes the proceeds of Bush's whirlwind fundraising tour in the early months of the year for Right to Rise but doesn't reflect money raised by the official Bush campaign or recent fundraising by other candidates and super PACs. (Fitzgerald is a Bush supporter, a fact he says he's made clear to his other clients.)

The bank puts most of the money it receives from campaigns into its excess reserves account at the Fed, where it earns interest. "Knowing that campaigns might need to take money out at any time, we more or less have to keep the deposits in cash," Fitzgerald says. The bank profits from the spread between the interest it earns from the Fed and what it pays depositors—lately about a quarter of a percentage point.

To diversify its portfolio, the bank has in recent years made a concerted effort to expand its mortgage lending business. It also serves medical businesses in and around McLean. But Fitzgerald's commitment to serving his campaign business well has made Chain Bridge the preferred destination for compliance specialists whose job is to refer new candidates to banks. "They made my life easier,"

says Red Curve's Crate, who estimates he's opened hundreds of campaign accounts at the bank. "They understood what my end goal was, and they were happy to help me get to that goal." —Phil Mattingly

The bottom line As campaigns raise more money than ever, Republican candidates have gravitated to a small Virginia bank.

Crime

Plea Deals Are Easy, Juries Are Hard

► Federal prosecutors keep losing trials in overseas corruption cases

► "That should raise questions about...all those cases that settle"

Under the Obama administration, the Department of Justice has turned the Foreign Corrupt Practices Act into a potent weapon against international corporate bribery. The statute forbids companies with U.S. ties from bribing foreign officials to gain a business advantage. Since 2009 the department has settled 58 corporate FCPA cases ►

◀ for a total of \$4.4 billion. Last year prosecutors reached a record: They used the FCPA to extract guilty pleas and \$1.6 billion in penalties from such companies as **Alcoa**, **Avon Products**, and the French power giant **Alstom** in just 10 settlements.

Most FCPA cases lead to settlements. Companies don't want to risk the reputational damage of a public trial, and individuals don't want to risk prison. Yet on the rare occasions in recent years when executives named as defendants have decided to fight the government, the Justice Department has been losing. Since September 2011, federal prosecutors have taken only four FCPA cases to trial. All of them ended in "debacles for the government," says Mike Koehler, an assistant professor at Southern Illinois University School of Law who writes a well-trafficked blog called FCPA Professor.

The most recent was a case against Miami businessman Joseph Sigelman, co-founder and former co-chief executive of **PetroTiger**, a Colombian oil-field-services provider. His trial ended abruptly on June 15 after the main prosecution witness fell apart under cross-examination and admitted he'd made misstatements in earlier testimony. Justice lawyers gave up and allowed Sigelman to plead guilty to one count of conspiring to bribe an official of Colombia's national oil company.

Sigelman was sentenced to three months of probation and no prison time—a striking victory, given that he'd originally faced 20 years behind bars. "The proof that he committed all of the far more serious crimes he was charged with, and that were dropped midtrial by the government, was weak and grounded in the testimony of a bad cooperating witness who committed

perjury," says Sigelman's attorney, William Burck, a partner with Quinn Emanuel Urquhart & Sullivan.

The government's trial record is no better when it comes to corporate prosecutions. In the entire 35-year history of the law, passed in the wake of the Watergate scandal, corporate defendants have dared to go to trial only twice. Both cases ended in government defeats. "That should raise questions about whether the Justice Department has provable evidence in all those cases that settle," says Koehler, who serves as a paid corporate consultant on FCPA issues.

Peter Carr, a Justice spokesman, says it's not surprising that prosecutors struggle with these cases in court. "FCPA cases, by their very nature, often require proof of criminal acts carried out in foreign countries," he says. "While obtaining foreign evidence—documents and witnesses—poses particular challenges in FCPA cases, the department remains committed to working with its domestic and foreign law enforcement partners to continue to bring successful prosecutions against the individuals who bribe foreign officials and the companies they work for." There typically aren't identifiable victims in FCPA cases, making it even harder for prosecutors to generate juror enthusiasm for a conviction.

The Obama administration won several courtroom victories in FCPA cases from 2009 to 2011, including in the trial of Frederic Bourke, the co-founder of luxury handbag maker Dooney & Bourke. A jury found him guilty in 2009 of investing in a corrupt deal to seize control of the state oil company in Azerbaijan; he was sentenced to a year in prison. He was among 57 individual defendants convicted on FCPA charges since 2009, most by plea, Carr says.

The Justice Department's recent setbacks don't mean the FCPA lacks punch. "Most people and companies remain too intimidated by the heavy penalties and legal costs to fight," says Burck, Sigelman's lawyer. Two other former PetroTiger executives, including the witness who crumbled on the stand, took plea deals and await sentencing. The next FCPA test may come in November, when Lawrence Hoskins, a former senior vice president of Alstom, is scheduled to face trial in Connecticut. In December, Alstom agreed to plead guilty and pay a record \$772 million in penalties in connection with a campaign to secure billions of dollars in contracts by means of bribery. Three other Alstom executives have entered guilty pleas, but Hoskins is determined to have his day in court.

—Paul M. Barrett

The bottom line Record fines for corporate corruption have overshadowed the government's poor record in the courtroom.

Roads

The Amazing Spider Van And the Streets of Doom

► Cities and states turn to rolling technology to spot potholes

► "Our very well-being depends on road infrastructure"

A white Ford van routinely rumbles through Phoenix, mapping the grief passing below its tires. It's one of the so-called spider vans that roam the country, named for the arms that protrude from its roof dangling high-definition cameras. They record continuous images of the asphalt to create a literal street view for city engineers whose job it is to decide which roads will be repaved. Lasers up front collect data that are fed into six onboard computers to flag which potholes and cracks most need fixing.

In early July, Phoenix's spider van drove down Devonshire Avenue, which was last resurfaced in 2001. The pavement got a number: 67 out of 100. It's now scheduled for repaving in 2018. "Our roads are in pretty tough shape," says Mark Glock, the city's deputy street transportation director, who adds that his annual budget is only \$23 million.

Quoted

"When is Donald Trump going to stop embarrassing his friends, let alone the whole country?"

Rupert Murdoch in a July 18 tweet, after Trump dismissed Arizona Senator John McCain's status as a Vietnam War hero at an Iowa rally

"We are on a 65-year cycle and we know pavement only lasts 35 years. We're very limited in our treatments."

Transportation departments used to wait for residents or businesses to request repairs, a system that favored squeaky wheels. With 65 percent of U.S. roads rated at less than good condition, cities and states no longer leave funding decisions to intuition and influence. In addition to Phoenix, about 20 transportation departments from Connecticut to Washington state have deployed video- and laser-equipped vans sold by the Dutch infrastructure surveyor **Fugro**, one of several companies around the world that sell rolling road assessment systems.

The push to rationalize road resurfacing comes as Congress moves to reauthorize the federal Highway Trust Fund, which includes accounts for **highways** and mass transit. The latest of 33 short-term extensions to the fund since 2005 runs out on July 31. Arizona receives as much as 29 percent of its money for highways and transit projects from the fund, 4 percentage points above the U.S. average, according to a February report by the Pew Charitable Trusts. Improving the condition of the country's highways and bridges will cost \$120 billion from 2015 to 2020, while current spending at all levels of government is just \$83.1 billion, according to the U.S. Department of Transportation.

In Phoenix funding from the state for street work has declined 30 percent since 2007. Before the city purchased its spider van in 2008, citizens who complained loudest often got their streets resurfaced first. Today, engineers apply data and images of the city's 5,000-mile street network to create digital color-coded maps that rate conditions from good to poor. They used the ratings to devise a five-year maintenance plan. "We didn't have a comprehensive grasp of the condition of every road and street," says Rubben Lolly, a city engineer. "Now we have the business to tell residents, 'Your road is in a condition to wait, because there's someone with one that's in worse shape.'"

Using a range of sensors, the spider van makes detailed images of the road's surface and measures an assortment of pavement characteristics, including rutting, roughness, and other defects. Data collected by systems mounted on Fugro's vans help officials prevent road damage as well as fix existing flaws, said DJ Swan, a senior pavement



The Phoenix spider van inspects streets in Papago Park on July 13



management engineer with the company. Engineers can pull up historical images on a mobile phone. "Pictures show us when a crack first appeared and how it changed," Swan says. "We know exactly why roads are failing and what we can do to prevent the failure."

The maps proved critical to persuading the Phoenix City Council to place a measure on the Aug. 25 ballot asking voters to increase the sales tax to 0.7 percent from 0.4 percent, in part to fix and repair roads.

Legislators in South Dakota voted to raise the state gasoline levy by 6¢ a gallon in April—the first jump in 16 years—after Republican Governor Dennis Daugaard in a January speech displayed pictures taken by the state's spider van. The vehicle travels the highways six months out of the year to catalog craters caused by freezing and thawing. "Our roads are, by far, our state's most valuable physical asset, worth over \$14 billion," Daugaard

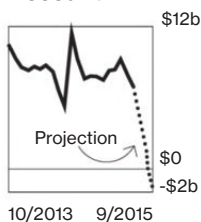
said. "Our entire economy, indeed our very well-being, depends on road infrastructure. And right now, our roads are underfunded." The speech was fine, but it was the pictures that told the story, says Darin Bergquist, the state's transportation secretary. "Any time you can go to the legislature with objective data, as opposed to subjective opinions, that really helps," he says.

After Hurricane Katrina, Louisiana officials used spider vans to make their case for additional federal funding to repair damage. Crews there recently collected another 90,000 miles of data. Connecticut's Department of Transportation is storing its data to create a historical catalog that lets engineers select a year and "drive" down byways, says spokesman Kevin Nursick. "We used to have to go out to a site to see if signs were missing," he says. "Now we can look on the digital highway and see if they're there or not."

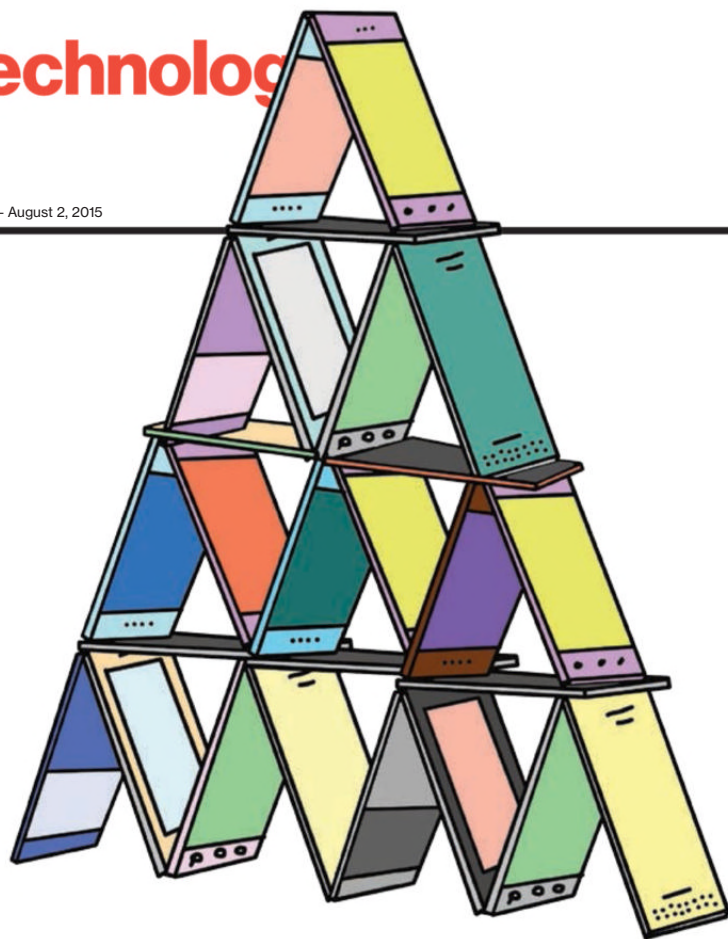
—Jennifer Oldham

The bottom line Cash-strapped transportation departments are relying on data collected by specially equipped vans to parcel out repairs.

Federal Highway Account



10/2013 9/2015



The Smartphone Shields Are Down

► In China, phone makers are struggling as ownership shrinks

► “Slower smartphone growth is affecting everybody”

Quarter after quarter, **Xiaomi** could do no wrong. Less than five years after its founding, the Beijing-based company became the No. 4 smartphone maker on earth, its well-built and relatively cheap devices trailing only **Samsung Electronics**, **Apple**, and **Lenovo** in global shipments. In 2014 the company shipped 57.7 million phones around the world, a more than 200 percent increase from the previous year. Xiaomi estimated its 2015 numbers would reach 80 million to 100 million phones. Then sales hit a wall.

On July 2, Xiaomi Chief Executive Officer Lei Jun said shipments in the first half of 2015 totaled 34.7 million phones, a growth rate of 33 percent over the first six months of 2014. Plenty of smartphone makers would be delighted with that kind of increase,

but it was a shocking slowdown for a company used to posting triple-digit gains, especially because it spent much of 2015 expanding into India. The reason was one familiar to almost every other company selling smartphones: Xiaomi’s home market “is increasingly saturated,” according to Bloomberg Intelligence analysts Matthew Kanterman and John Butler. Xiaomi declined to comment.

Local and foreign companies alike have been dependent on steadily increasing demand in China, which accounts for about a third of the world’s 1.3 billion smartphones. But that pillar of growth had been eroding even before the Chinese stock market crash that wiped out almost \$4 trillion in wealth in late June and early July. The total number of mobile phone

users in China fell slightly in the second quarter (by about 1 million). From phone carriers to manufacturers to component makers, “slower smartphone growth is affecting everybody,” says Steven Pelayo, a technology analyst in Hong Kong with HSBC.

Much of the problem is simple math: Growth can’t keep rising forever in a market where most of the people who would want a smartphone already have one, especially as the country’s broader economic growth dips. But China’s leading phone carriers, state-owned **China Mobile** and **China Unicom**, are also part of the reason for ebbing demand. Both had kept phone prices artificially low for years until last summer, when the government ordered them to control their spending and slash customer subsidies. No. 1

China Mobile cut its annual subsidies from about \$5.5 billion to \$3.4 billion. China's smartphone shipments shrank 4.3 percent in the first quarter of 2015, and market researcher IDC expects flat growth for the year.

Phone makers from outside China may be feeling more pain than Xiaomi. On July 7, Samsung announced a 4 percent drop in operating income in the second quarter, as sales of its Galaxy S6 smartphones, which the company had predicted would break records, fell short of analysts' estimates. Rival **HTC**, which had warned in June that "weaker-than-forecast sales in China" would hurt its revenue, reported on July 6 a quarterly loss of \$257 million. In June, Lenovo replaced the head of its mobile division after shipments fell 22 percent in the first quarter; the company declined to comment.

As the rest of the industry struggles, Apple has solidified its dominant position with affluent Chinese consumers. iPhones accounted for 87.5 percent of high-end phone sales in their first two quarters on the market, according to IDC, up from 55 percent after the 2013 launch of the iPhone 5S. Globally, smartphone shipment growth last year was about 28 percent, IDC says, but will barely top 10 percent this year largely because of China's slowdown.

The average smartphone purchase price in China rose from \$192 in the third quarter of 2014 to \$263 in the first quarter of this year, "a reflection of the popularity of the iPhone 6 and 6 Plus," says IDC analyst Bryan Ma. Still, Apple's growing reliance on China isn't always good news. On July 21 the company's stock slid almost 7 percent after CEO Tim Cook announced third-quarter results that fell short of expectations. The biggest miss was in China, where iPhone shipments totaled 12.5 million, Bloomberg Intelligence says, about 2 million below IDC estimates. The stock market volatility in China "could create some speed bumps in the near term," Cook said on an earnings call. But, he said, "we're not changing anything."

As business softens in China, contract manufacturers such as Taiwan's **Compal Electronics** are trying to win orders from **Micromax** and other phone makers in India, but those emerging companies have been less

1.3_b

Number of
smartphones
globally, of which
China accounts
for about a third

ers," Tseng says. "Those customers tend to shop around."

To reduce the impact of the local slowdown, Xiaomi has begun working with Chinese appliance maker **Midea Group** on a smart air conditioner. Xiaomi may bring its smart air filter to India along with its phones, says Vice President Hugo Barra, and is also expanding beyond China and India, setting up shop in Brazil in July. Thailand, Vietnam, and Russia are coming within 12 months, Barra says, citing Indonesia as another focus. For now, though, Kanterman and Butler say, Xiaomi's disappointing first-half results make the 2015 target of 100 million phones seem like "a stretch." —*Bruce Einhorn and Tim Culpán*

The bottom line Growth in China's market of 400 million smartphone users has almost flattened, leaving manufacturers scrambling.

E-Commerce

Why You Shouldn't Call Your Investors Dumb

► Housing.com's tantrum-prone boss resigned, unresigned, and got fired

► "The board believed that his behavior is not befitting of a CEO"

There are chief executive officers who've had fraught relationships with their boards. Then there's **Housing.com**'s Rahul Yadav. In barely two years, Yadav secured more than \$125 million in venture capital and made his Mumbai-based company one of India's leading online hubs for real estate rentals and sales. In a matter of months, he also accused prominent investors of

vague misdeeds, publicly berated his directors, taunted other entrepreneurs, and resigned—then unresigned.

Finally, Housing.com's directors decided they'd had enough. Following a July 1 meeting, the board announced it had removed Yadav and installed Chief Operating Officer Rishabh Gupta as interim CEO. "The board believed that his behavior is not befitting of a CEO and is detrimental to the company," Housing.com spokeswoman Zeenat Khan said in a statement. She declined to comment further on transition plans.

Some of Yadav's statements might make even the *enfants terribles* of Silicon Valley blanch, but some would envy his aggressive expansion. Housing.com has averaged 5.3 million monthly visits since January, 40 percent more than longtime market leader **99acres.com**, according to online analytics provider SimilarWeb. Under Yadav, the site's 2,200 employees "have changed the face of real estate search in India," says Sandeep Muthangi, an analyst at brokerage IIFL Institutional Equities. It's unclear whether Yadav's successor will be able to fend off richer rivals in the 100 cities where Housing.com operates. "We'll have to see how long they'll think of new ideas and be very creative," Muthangi says.

Since its 2012 founding, Housing.com has stood out from rival services by policing fake and repetitive listings. It's done so largely by forcing users who want to post a home to allow the company's own photographers to visit the place and verify the listing. The photographers shoot from standardized angles to provide clear points of comparison. Housing.com's online and mobile interfaces, similar to those of Chicago-based **Apartments.com**, let home-seekers filter results based on amenities such as air conditioning and furnishings.

Yadav was one of Housing.com's 12 co-founders, all classmates at Mumbai's elite Indian Institute of Technology. (He dropped out.) A software specialist, Yadav also proved adept at raising money from overseas investors, most notably Japanese telecom giant **SoftBank**, which led a ►

"If you don't stop messing around with me, directly or even indirectly, I will vacate the best of your firm."
—Rahul Yadav

Yadav



◀ \$90 million investment in December and became the company's largest shareholder. With the money flowing, colleagues were willing to overlook periodic tantrums, says a person familiar with the matter. In March, after Silicon Valley venture firm **Sequoia Capital** hired away one of his staffers, Yadav sent a Sequoia managing director an e-mail, later posted on the Q&A site Quora, accusing him of "brainwashing" Housing.com employees.

"If you don't stop messing around with me, directly or even indirectly, I will vacate the best of your firm," Yadav wrote. Sequoia declined to comment, although a response from the managing director, also posted on Quora at the time, called for collaboration instead of "being vindictive and petty."

Housing.com's influx of foreign money brought more outside input on day-to-day operations, and Yadav clashed with investors over personnel appointments and the speed of his expansion, says the person familiar with the matter. By the end of April, the CEO openly derided his board, which was made up of representatives from SoftBank, Indian fund **Nexus Venture Partners**, and Mauritius-based **Helion Ventures**. In an open letter announcing his resignation on April 30, he wrote that he didn't consider his directors "intellectually capable enough to have any sensible discussion."

In a move worthy of George Costanza, Yadav withdrew his resignation a few days later. He recouped goodwill among employees by bequeathing them his entire stake in the company, then worth at least 1.5 billion rupees (\$24 million). For each of the 2,200 staffers, that meant a stock award worth about a

year's pay. "I'm just 26, and it's too early in life to get serious about money," Yadav said in a statement. Via Twitter, he challenged founders of much bigger Indian e-commerce startups to do the same. Around the same time, Housing.com's board put him on probation, and when he didn't meet the terms of that probation, he was let go, according to India's *Economic Times Daily* newspaper. Via e-mail, Yadav denied he was put on probation but declined to comment further.

Yadav's replacement will have to work hard to keep ahead of rivals who have begun to copy the Housing.com model, says Abhishek Shindadkar, an analyst at brokerage ICICI Direct. "Housing.com's app is still better, but others are catching up," he says. Muthangi, the IIFL analyst, says the company has spent a lot on advertising, and for now, revenue "doesn't appear to be a focus."

Yadav may have some changes in the works, too. On July 8 he posted on his Facebook page, "Looking for a girlfriend. Interested people please drop me a direct message." The post has since been deleted. —*Adi Narayan*

The bottom line Yadav won more than \$125 million in funding for Housing.com in two years, but he couldn't control his own temper.

Big Data

Searching for Drug Side Effects



► Google queries might help the FDA spot medical safety issues

► "The right technology to connect the dots" can detect problems early

For years, the Food and Drug Administration has relied on patients, doctors, and pharmaceutical companies to report drug side effects. The agency may soon try to glean that information from **Google** searches, too.

According to agency records, FDA

officials held a conference call on June 9 with senior Google researcher Evgeniy Gabrilovich, who co-wrote a 2013 paper about using search query data to spot adverse drug reactions. FDA spokesman Christopher Kelly described the meeting as a chance "for the agency to begin a discussion on how we might collaborate with Google on identifying adverse event data." The company declined to comment.

Gabrilovich, who specializes in data mining, began scanning searches for drug reactions while at **Yahoo!** His paper, published in the *Journal of Medical Internet Research*, analyzed 176 million Yahoo queries from 2010 and concluded that search data can help find reactions "that have so far eluded discovery by the existing mechanisms." Searches such as "cramps," "weight gain," and "tired" proved likely to reveal side effects that didn't show up in early testing because they "appear much later after the beginning of treatment." For example, search logs showed that the antidepressant Effexor was associated with sleepiness 6 to 10 weeks after patients first searched the name of the drug, according to the paper.

Before the FDA approves drugs, the only people who get them are carefully selected patients enrolled in clinical trials, generally a few thousand users at most. After medicines reach the market, they may go to hundreds of thousands or millions of people, some of whom will be taking additional pills or have preexisting conditions that the drug may disrupt. Evidence of negative side effects can lead regulators to change a drug's safety warnings or how it is prescribed. In extreme cases, a medicine can be pulled from the market, as happened with the painkiller Vioxx, which was approved in 1998 and withdrawn in 2004 after a link was established to heart attacks.

The government's process for tracking so-called adverse events—which involves patients, doctors, and pharmaceutical companies submitting forms—hasn't changed much since the 1990s. The FDA now gets more than 1 million reports of adverse reactions a year. Although the agency has tried to make the data easier to access, critics say the system is slow and probably misses many side effects. "They're coming to grips with the fact that there needs to be a better system for postmarket surveillance," says Brian Overstreet, president of **AdverseEvents**, a California company that analyzes

the FDA's data to help health plans understand the costs of drug side effects. (Bloomberg LP, the parent company of *Bloomberg Businessweek*, licenses data from AdverseEvents.)

The medical industry has been trying for years to sift through the Internet to dredge up meaningful signs of drug reactions. "If you have the right technology to connect the dots, then you can see problems very, very early on," says Ido Hadari, chief executive officer of **Treato**, which scans online patient forums and sells its reports to pharma companies. In an analysis of postings on the asthma drug Singulair, Treato found links to depression, anxiety, and hallucinations that predated warnings from manufacturer **Merck** and the FDA.

Microsoft researchers have worked on search mining for years and have co-authored a paper with FDA staff, says Eric Horvitz, a scientist and managing director at the company's research arm. In 2013 he co-wrote a paper with Microsoft colleagues and Stanford researchers concluding that search data could have more quickly revealed a link to high blood sugar in the combination of the antidepressant Paxil and the cholesterol-lowering drug Pravastatin. People who searched for both drugs on Google, Yahoo, and Bing over a 12-month period in 2010—a year before the link was publicly reported—were also more likely to search for terms related to high blood sugar, such as diabetes and dry mouth, according to the paper, published in the *Journal of the American Medical Informatics Association*.

Although the FDA wouldn't comment on the agency's talks with companies other than Google, there are signs that the agency is focusing on more troves of messages online. Last year an FDA researcher co-authored a paper about monitoring drug safety on **Twitter**. In June the FDA announced a collaboration with PatientsLikeMe, an online patient network, to monitor health forums for warnings of drug hazards. "The way we are taking care of patient safety once it's out there—once products are out there in the real world—belongs in the '70s," Hadari says. "We can do much better." —*John Tozzi and Dina Bass*

The bottom line The FDA and Google are starting to talk about ways to spot drug side effects faster by analyzing search data.

Innovation

Child Prostheses

Form and function

E-Nable designs 3D-printed prostheses for children older than 3 and shares their blueprints so they can be made for as little as \$30. This way, the prostheses can be easily replaced as the kids outgrow them.

Innovator Andreas Bastian

Age 25

Technical director of Los Gatos (Calif.) nonprofit E-Nable Community Foundation and 3D-printing researcher at Autodesk



Setup Made from \$8 to \$15 worth of nontoxic, waterproof 3D-printer plastic and five screws, the prosthetic hands connect to a child's active muscles via elastic straps.

Background Each year, 32,500 U.S. kids undergo amputations, and the Centers for Disease Control and Prevention estimates that about 1,500 are born with "upper limb reductions."

Origin Bastian, formerly head of R&D at MakerBot, began developing E-Nable's hands in 2013.

Funding In May, Google donated \$600,000 to support E-Nable's R&D and production.

Other options An Iron Man-branded prosthetic forearm and hand developed by Limbless Solutions costs about \$300 to build.

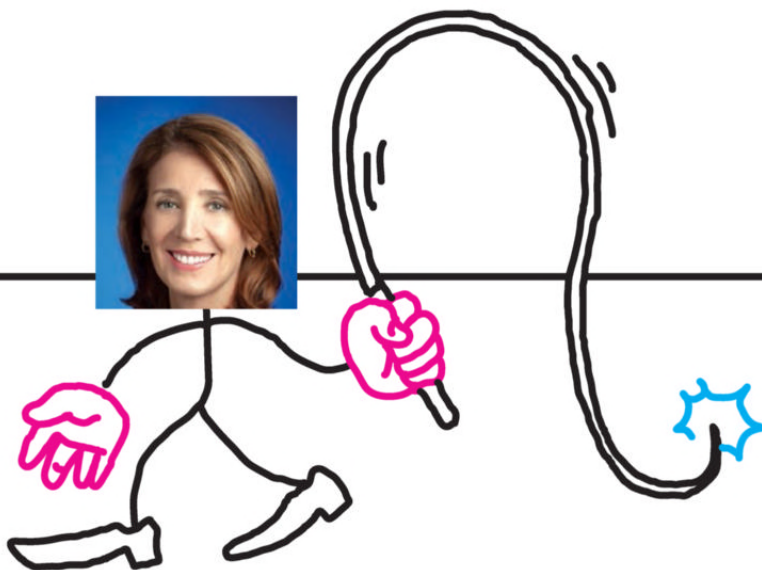


Source E-Nable's open source 3D blueprints are available through Google Drive.

Next Steps

This year, E-Nable has made more than 270 hands and seen other companies use its specs to fill orders as large as 2,000, Bastian says. Next he's working on elbows and shoulders. "It has changed everything," says Robert Graboyes, senior research fellow in health-care economics at George Mason University. "Children were not a viable audience as recently as two or three years ago, because they would outgrow costlier prosthetics too quickly." —*Richard Morgan*

July 27 — August 2, 2015



The Google Tamer

► Ruth Porat brings Wall Street discipline to the freewheeling search giant

► “This perception of a real, hard-nosed woman who has something to prove...inspires confidence”

Google is known for multicolored bicycles, nap pods, and complimentary meals—and the free-spending ways that come with those perks. Now it wants to be known for something else: financial discipline. To whip the numbers into shape, it's brought in Ruth Porat, an almost 30-year veteran of Wall Street.

She's off to a good start. Porat, who joined Google as chief financial officer in May after five years as **Morgan Stanley's** CFO, on July 16 unveiled second-quarter earnings and sales that topped analysts' estimates. Impressed investors sent the shares to a record the next day, adding \$65 billion to the company's market value and more than \$4 billion each to the fortunes of co-founders Larry Page and Sergey Brin.

Shareholders cheered Porat, 57, with her strong finance background, as the right person to help instill more discipline at a company that's invested in everything from driverless cars to giant barges. Now she must prove she can create efficiency without crimping the creative culture that's helped Google dominate the online advertising market. “No one really knew her before, because there's no reason a tech investor would really know her,” says Gene Munster, an analyst with Piper Jaffray. When she announced the second-quarter results, the idea that a Wall Street hand was whipping Google into shape “kind of went viral,” he says. “This perception of a real, hard-nosed

woman who has something to prove—I think that inspires confidence.”

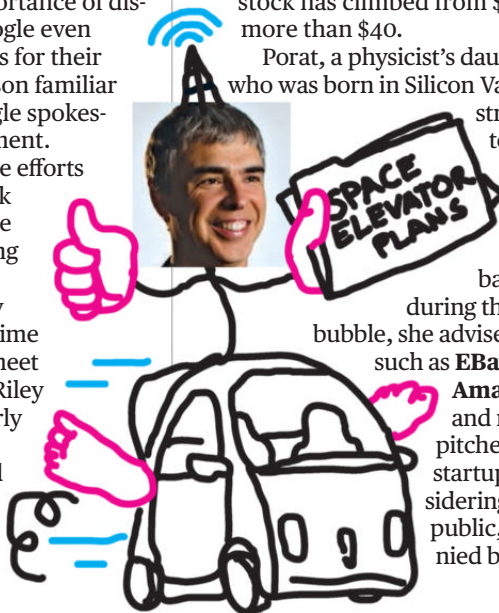
During the second quarter, Google's operating expenses grew 13 percent from the same period a year ago, the slowest rate since 2013, and declined from the previous quarter. “A key focus is on the levers within our control to manage the pace of expenses while still ensuring and supporting our growth,” Porat said on a call with analysts. Her remarks also left open the possibility of Google returning cash to investors in the form of buybacks or dividends, something Wall Street has been asking about for years. At a companywide meeting following the earnings report, she talked about the importance of disciplined execution at Google even as she thanked employees for their work, according to a person familiar with the remarks. A Google spokeswoman declined to comment.

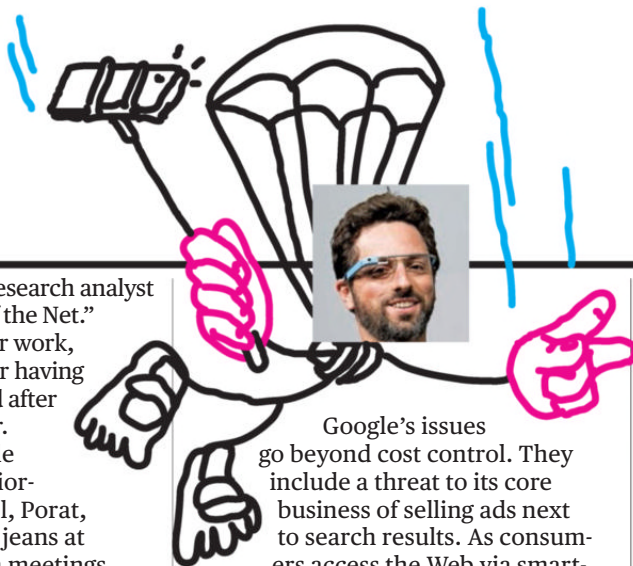
Porat benefited from the efforts of her predecessor, Patrick Pichette. Google's increase in expenses started slowing during the first quarter. “Everything was probably already in motion by the time she came along,” says Sameet Sinha, an analyst with B. Riley & Co. Even so, the quarterly numbers seemed to resonate with investors, as did Porat's résumé. “She comes with a pedigree from Morgan Stanley

of doing a good job of enhancing shareholder value over her tenure there,” says Walter Price, co-manager of the AllianzGI Technology Fund, which owns shares of Google.

At Morgan Stanley, Porat helped the bank recover from its near-death experience during the financial crisis and developed a reputation as a cost-cutter who focused on boosting shareholder returns. In 2013 she laid out expense-reduction targets of \$1.6 billion and last year gained approval for the bank's biggest share buyback in four years. This year, the company more than doubled the share repurchase plan. Since the end of 2012, Morgan Stanley stock has climbed from \$19 to more than \$40.

Porat, a physicist's daughter who was born in Silicon Valley, is no stranger to technology. As Morgan Stanley's top Internet banker during the dot-com bubble, she advised clients such as **EBay** and **Amazon.com** and made pitches to tech startups considering going public, accompanied by her close





Cyber nervous?
Cyber insure! 38

Bears claw after
gold 39

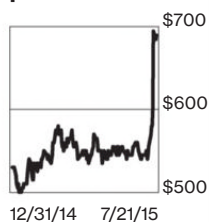
Bid/Ask: Lockheed to
fly the president; own a
30,000-acre ranch 40

friend Mary Meeker, the research analyst who was called “Queen of the Net.” Porat showed a passion for work, quickly diving back in after having each of her three sons and after a battle with breast cancer.

Connecting with Google shareholders will be a priority. After the earnings call, Porat, who traded pantsuits for jeans at Google, planned to begin meetings with investors in cities such as New York and Boston, making the case for Google’s prospects.

Announcing Porat’s hiring in March, Page said she would “invest in a thoughtful, disciplined way in our next generation of big bets.” She received a pay package worth more than \$70 million that will vest from this year through 2019, according to a company filing. In her first months on the job, she’s been reviewing programs throughout the company. They include driverless cars, which seek to use technology to take humans out

Google share
price



of the process; Project Loon, an effort to deliver Internet connectivity to rural and remote areas via high-altitude balloons; and Google Fiber, its broadband and TV service in select cities, according to

a person familiar with the matter. Some of those initiatives may have to be abandoned. “She might have to go and tell Larry and Sergey, ‘Here are 10 projects, pick five—let’s go with those,’” Sinha says. The Google Fiber project could get a hard look, according to Munster, because it competes with established companies such as **Verizon Communications** and **AT&T** that are focused on building and delivering broadband and TV services.

Lifting the share price is crucial for Google, where many employees get much of their compensation in stock and can easily jump to a rival such as **Apple**. In the year before Porat was named to the job, the shares had fallen 4.5 percent while the Nasdaq Composite Index had climbed 17 percent. “Retention is the biggest challenge,” Munster says.

Google’s issues go beyond cost control. They include a threat to its core business of selling ads next to search results. As consumers access the Web via smartphones instead of desktop PCs, they’re increasingly likely to tap on an app rather than open a browser.

At the same time, Google faces stronger competition in online commerce from Amazon, which is grabbing more users who skip comparison shopping on Google and buy from the retailer. Also, **Facebook**, growing more quickly than Google, is competing for advertising and is a threat to Google’s YouTube business as it pushes video options to its users. “It was a good quarter, but it doesn’t mean there aren’t a lot of the same structural and competitive concerns,” says Ben Schachter, an analyst at Macquarie Securities. —*Brian Womack and Michael J. Moore*

The bottom line Investors welcomed Porat by adding \$65 billion to Google’s market value after she presented second-quarter earnings.

Housing

Retiring Boomers Crowd The Rental Market

► Former homeowners vie with millennials for apartments

► “I don’t pay property taxes. I don’t pay for maintenance”

Mike Abelson calls it his “man cave.” After his wife died in October 2012, the 65-year-old put his house in Potomac, Md., up for sale and began renting a 1,400-square-foot apartment eight miles away in Bethesda. “I pay a pretty steep rent, but it’s worth it,” Abelson says. “I don’t pay property taxes. I don’t pay for maintenance, plumbing, or electrical. I don’t have to pay for the grass cutting. It’s just easier than being a homeowner.”

Abelson is among the ranks of senior renters who are expected to more than double, to 12.2 million, by 2030, according to research from the Urban Institute. While younger adults of the millennial generation have helped drive demand for apartments, it’s older Americans who will flood the market in years to come, pushing up rents and spurring construction of more multifamily housing. “It’s a combination of their sheer size and that they’re entering the age range where they increasingly downsize,” says Jordan Rappaport, a senior economist at the Federal Reserve Bank of Kansas City who’s studied the phenomenon. “It will put upward pressure on rents for all types” of multifamily buildings.

Rappaport found that adults in their 50s and 60s accounted for almost all of the increase in multifamily-building occupancy from 2000 to 2013. When the earliest members of the Baby Boom generation enter their 70s next year and start downsizing, “multifamily home construction is likely to continue to grow at a healthy rate through the end of the decade and thereafter remain well above its level prior to the housing crisis,” Rappaport wrote in a report published in June.

Millennials and boomers could be competing for the same places to live. **Alliance Residential** is building housing complexes where the generations can coexist, says Ian Swiergol, managing director of the Alliance division covering Arizona, New Mexico, and Utah. The developer is designing buildings with smaller, more affordable units on ground floors to attract young adults, while creating bigger units on upper levels that feature wine refrigerators and touch-button window shades to appeal to boomers, says Swiergol. “We had one instance where we had a grandson, who was 28, and his grandmother, who was 90, both living in the same community,” he says. Alliance, which has 34 regional offices nationwide, with an emphasis on major cities, is also exploring the construction of housing designed specifically for boomers, from independent living for ►

“We had one instance where we had a grandson, who was 28, and his grandmother, who was 90, both living in the same community.”
—*Ian Swiergol, Alliance Residential*

Apartment Boom

41%

Up from 16% six years ago, when economic expansion began

Share of total housing starts in June that were multifamily buildings

7.1%

Rental vacancy rate during the first quarter of 2015

Up from 7% at the end of 2014, which was the lowest since 1993

\$1,367

Nationwide median monthly rent in May

Up 14% from four years ago

◀ active seniors to assisted-living and memory-care facilities, he says.

Bozzuto Group, which manages about 51,000 units from Washington to Chicago—including Abelson's—says about 10 percent of its renters in 2014 were at least 60 years old, up from 8 percent in 2012. The company expects the share to continue to grow, according to President Toby Bozzuto. “And we haven’t even begun to develop for them specifically,” he says, adding that the company is looking to add rental properties catering to residents 55 and older.

Construction of multifamily housing has driven the industry’s recovery in recent years. Buildings with five or more units represented about 41 percent of total U.S. housing starts in June, compared with 16 percent when the economic expansion began six years earlier, Department of Commerce figures show. Homebuilders such as **Lennar** are racing to take advantage of the market. The company, which focuses on single-family homes, said it’s formed a \$1.1 billion joint venture with institutional investors to develop multifamily communities in 25 U.S. metropolitan markets.

Still, the rental vacancy rate is hovering near 21-year lows: It was 7.1 percent in the first quarter after falling at the end of 2014 to 7 percent, the lowest level since 1993, according to Commerce Department data. Such conditions have made it easier to raise rents. The nationwide median monthly rent as of May was \$1,367, up 14 percent from four years earlier, according to real estate website Zillow.

The Department of Labor’s measure of what consumers pay for rental units has increased 3.5 percent in the 12 months through June. By comparison, consumer prices, minus food and energy, have advanced 1.8 percent in the same period. Rents are increasing so quickly they’ve helped put a floor under broader inflation measures, which Federal Reserve policymakers are keen to see rise as they

contemplate the timing of their first interest rate increase since 2006.

Rapidly rising rents could make life much harder for seniors who rent because they have to, not because they want to, says Laurie Goodman, director of the Housing Finance Policy Center at the Urban Institute. Generation X adults—those born from 1965 to 1980—who lost their homes in the housing crisis may have also lost the desire to own, further boosting rental demand. “It’s not unreasonable to think that some seniors are going to get hurt disproportionately, because rents are going to rise and their fixed incomes aren’t going to grow accordingly,” she says. “There’s going to be just a huge surge in the demand for rental housing, and there’s not enough—period.” —Victoria Stilwell

The bottom line With baby boomers helping drive down vacancy rates, rents climbed 3.5 percent in the 12 months through June.

Insurance

Fear a Cyber Attack? AIG Has a Policy for That



► Former FBI agents help the insurer expand a market

► “What’s changing every day is the threat”

A three-hour shutdown of the New York Stock Exchange on July 8, the same day that a network failure halted all **United Airlines** flights in the U.S., had people across the country thinking one thing: cyber attack. It wasn’t,

but the possibility is always on the mind of Austin Berglas, who started the FBI’s New York cybercrime unit in 2009 and worked on probes into last year’s breach at **JPMorgan Chase** and the Silk Road drug market. Berglas says he helped New York City agencies to prepare for an Armageddon scenario in which the Nasdaq exchange, the subway system, and **Con Edison** go offline at the same time. “There’s going to be mass panic, people are going to think it’s a terrorist attack, people are going to think it’s another 9/11 event,” he says. “You have to get folks stranded in a subway in the middle of tubes or people stuck in buildings.”

In May, Berglas went to work for **K2 Intelligence**, a corporate investigations company partly owned by **American International Group**, which is looking to expand its cyber insurance business. AIG is counting on Berglas and his team to investigate attacks on policyholders. It’s also asking K2 to provide data on threats, which it can use to help protect clients. Tracie Grella, who oversees cybercoverage at AIG for companies including retailers, banks, and power plants, says the insurer wants to use the data for itself and “our clients so they know what industries are being targeted by what type of attackers, what the motivation is, if it’s on the rise.”

AIG says it wrote the first cyber-policy in 1997; it declines to say how much cyber insurance it’s sold. Grella predicts the market could rise to \$10 billion in annual premium revenue by 2020, from about \$2 billion this year. While current policies cover only data breach and business interruption costs, Grella says AIG plans to start offering as much as \$100 million in coverage for property damage and \$100 million in bodily injury caused by a cyber attack.

Zurich Insurance Group and **Munich Re** are considering offering similar coverage. “We are listening to our customers, who tell us they are looking for larger limits—some as high

Quoted

“We view that as a very bullish sign on the future that there’s a lot of head room left for upgraders.”

Apple Chief Executive Officer **Tim Cook** on the fact that 73 percent of people with old iPhones haven’t switched to the new model

as \$1 billion in coverage for cyber property damage and business interruption,” says Dan Riordan, who runs Zurich’s corporate business in the U.S. and Canada.

Property and general liability policies have been excluding damage caused by cyber attacks, according to Kevin Kalinich, who leads the cyber risk team at insurance broker **Aon**. And most insurers don’t provide many types of cybercoverage because there’s almost no data available to determine costs, says Tracy Dolin, a Standard & Poor’s analyst. To quantify the scope of potential damage to critical infrastructure, **Lloyd’s of London** and the University of Cambridge modeled a scenario that blacked out parts of the Northeastern U.S. for several weeks. The July study found \$1 trillion in damages from lives lost, business interrupted, and fines for such things as failure to provide power.

AIG has fewer than 20 years of actuarial records to use in pricing its cyber offerings, compared with 50 to

\$10_b

Potential size of the cyber insurance market in 2020

100 years of data available to underwrite other forms of property or general liability insurance, Grella says. As reputational harm and business costs from cyberdisruptions have mounted, companies have

been unable to buy enough insurance to cover losses. Standard & Poor’s estimates that **Target’s** policy covered \$90 million, which left the company with \$162 million of uninsured business interruption, legal, and network restoration costs resulting from a 2013 breach. The largest policy available is about \$400 million, S&P estimates.

K2, founded by corporate investigators Jules Kroll and his son Jeremy, has been bulking up its cyber response unit with former FBI agents such as Berglas. “What’s changing every day is the threat,” Jeremy says. “Guess what the bad guys are up to? They’re up to new technologies and tools.” K2 is competing with companies such as **Verizon Communications**, which offers security consulting and malware detection, and **FireEye’s** Mandiant, which advised on a breach at **Sony** last year. Mandiant has hired more than 100 former government officials since 2013.

No amount of preparation or

insurance can eliminate the threat of cyber attacks. “It’s pretty clear you can’t mitigate all risks,” says Robert Brenner, K2’s global head of cyberdefense services. “There’s a role for insurance for offloading a certain portion of that risk that can’t be protected overall,” he says, “so that people can feel comfortable that they are going to continue to exist, even if there is a significant event.” —*Sonali Basak*

The bottom line The market for cyber insurance could climb to \$10 billion by 2020, up from \$2 billion this year.

Commodities

They Come to Bury Gold, Not to Praise It

► Slumping for months, the price of bullion falls to a five-year low

► “The only place to be right now is short”

With gold prices tumbling to a five-year low, investors aren’t just getting out of gold—they’re betting against it. Speculators in July amassed record short holdings in the metal, meaning they’re wagering that the price has further to fall. Also telling, the number of hedge funds that are hoping to profit from declines is near a record high.

Altegris Investments’ \$513 million Futures Evolution Strategy Fund has increased its bets that gold will fall. “The only place to be right now is short,” says Lara Magnusen, a portfolio strategist at Altegris. “We’ve been in persistently downward price

action for gold, but it’s been exacerbated, certainly, this year by a host of fundamental reasons.”

It’s been a painful two years for gold bulls, who’d been piling into exchange-traded funds and similar investments backed by the metal, accumulating a record hoard by the end of 2012. Since then more than \$84 billion has been erased from the funds’ value, and their assets have dropped to the lowest level since March 2009.

After drifting lower for most of 2015, prices plunged in July. Gold futures for August delivery fell 0.3 percent on July 21, to \$1,103.50 an ounce, on the Comex in New York. The price touched \$1,080 the previous day, the lowest since February 2010, and is down 16 percent in the past 12 months.

Analysts predict more losses. Barnabas Gan, an economist at Singapore’s OCBC Bank who’s the most accurate forecaster of precious metals in rankings compiled by Bloomberg, predicts gold will reach \$1,050 by December. ABN Amro Bank’s Georgette Boele and Robin Bhar of Société Générale say bullion will approach \$1,000 by December.

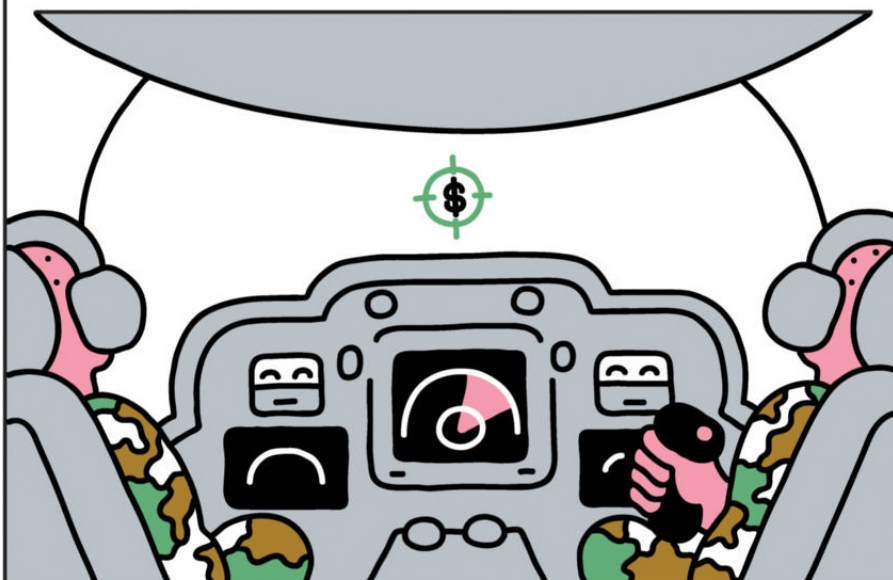
One factor in the decline was

A Hard Downhill Ride



Bid/Ask

By Kate Rooney



\$9b

Lockheed Martin swoops in on a helicopter unit. The Pentagon's largest weapons maker will push further into military hardware as it buys United Technologies' Sikorsky unit, which produces the Black Hawk and the new Marine One, the president's official helicopter. Lockheed Martin, which makes the F-35 fighter, unmanned drones, and missiles, says it's exploring a sale or spinoff of its information-systems business.

\$6.7b

Exor disrupts a deal. The Italian investment company increased its bid for PartnerRe, which had been planning to merge with Axis Capital Holdings.

\$3.4b

St. Jude Medical captures a heart implant maker. The device manufacturer is buying Thoratec to bolster its push in new and faster-growing markets.

\$3b

HNA Group grabs an airport luggage handler. The owner of China's fourth-largest airline is said to be in talks to acquire Swissport International.

\$2.3b

Stericycle gets a document destroyer. The medical-waste management company is buying Shred-it International, which had been planning to go public.

\$1.9b

Magna International changes gear. The Canadian auto parts giant is buying Germany's Getrag, one of the largest independent makers of vehicle transmissions.

\$1.6b

Home Depot adds to its contractor business. The No. 1 home improvement retailer agreed to buy Interline Brands, a distributor of contractor and janitorial supplies.

\$725m

For sale: a Texas ranch the size of a small country. The W.T. Waggoner Estate has 30,000 acres of cropland, more than 1,000 oil wells, and 6,800 head of cattle.

◀ Federal Reserve Chair Janet Yellen confirming that the Fed will raise interest rates this year. Higher rates can draw investors toward bonds and away from gold. The prospect of higher rates is also boosting the dollar, and a strong dollar tends to keep a lid on inflation, which also diminishes gold's appeal as a hedge against rising prices. The low prices have yet to spur more buying in Asia, where Indian brides and Chinese aunts—as middle-aged matriarchs are respectfully known—are usually avid consumers.

The collapse in gold prices is part of a general commodities slump. Adding to the metal's woes, prices for everything from copper to oil to sugar are in a meltdown that's signaling inflation will probably stay subdued. The Bloomberg Commodity Index dropped to a 13-year low on July 22. As prices slide, mining stocks are also suffering. Shares of Canada's **Barrick Gold**, the world's largest producer, dropped to its lowest price since 1990 in Toronto on July 22.

Unlike other commodities, gold typically benefits from uncertainty in the world economy. Yet neither the Greek bailout negotiations nor the Chinese stock rout that erased \$4 trillion in wealth spurred investors to seek shelter in gold. "A lot of people have held gold as insurance or as a hedge against geopolitical risk, and we found that trade seems less effective over the last few years," says Jim Tassoni, chief investment officer at Regal Investment Advisors in Kentwood, Mich. "Gold has no dividends and no yield, and that presents a lot of opportunity cost," because the money invested in it could be more profitably deployed elsewhere.

"I started adding to the gold short position in January and February, and I'd like to increase it," says John Stephenson, chief executive officer of Stephenson & Co. Capital Management in Toronto. "Gold tends to have a very weak fundamental trend because it's mainly held for psychological reasons." He says that if the gold price recovers a bit, he'll increase his bets against it. —*Luzy-Ann Javier, Debarati Roy, and Joe Deaux*

The bottom line After gold's 16 percent drop in the past year, some analysts predict the price could fall to \$1,000 an ounce.

B Edited by Eric Gelman
Bloomberg.com



NO BRANCHES = GREAT RATES

WE SKIPPED THE BRANCHES
AND WENT STRAIGHT TO THE SAVINGS.

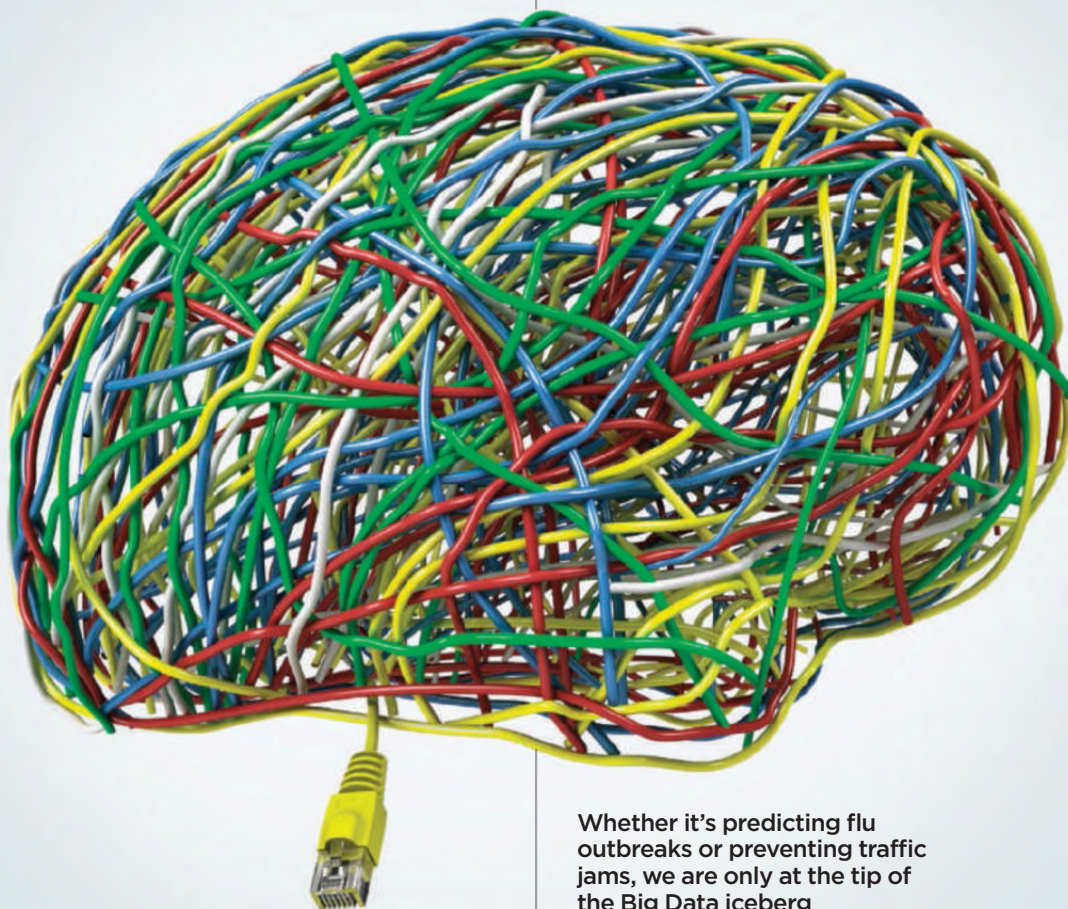
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DATA ANALYTICS: GO BIG OR GO HOME



Whether it's predicting flu outbreaks or preventing traffic jams, we are only at the tip of the Big Data iceberg

THE ERA OF “BIG DATA”—

a time when petabytes of information on consumer behavior and countless other topics fly onto corporate and government servers every week—is irrevocably upon us.

While the term generally refers to data volumes or processing tasks that are too large or complex for conventional computing firepower to handle, many Americans regard Big Data as shorthand for widespread personal information harvesting and analysis mainly done for surveillance and marketing purposes—the kind that lets government agencies capture your phone records and corporations examine your online behavior in order to sell you products using targeted advertising.

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That type of activity certainly occurs, but such uses are only the tip of the Big Data iceberg. From predicting flu outbreaks and preventing traffic jams to anticipating shifts in the political zeitgeist and reducing crime, Big Data science has countless applications—and potential rewards that go beyond what we can currently imagine.

“We’d rather call Big Data ‘decision analytics,’ because processing that data has to help you make better decisions and take intelligent actions in the real world,” says Ramayya Krishnan, Ph.D., Dean of Carnegie Mellon University’s Heinz College in Pittsburgh, a private graduate school that has been a leader in data analytics since its founding in 1968.

“This is why we use ‘intelligent action’ as the watchword for decision analytics,” adds Krishnan, who is also the W.W. Cooper and Ruth F. Cooper Professor of Management Science and Information Systems at Carnegie Mellon. “The ‘intelligent’ piece is, how do you derive value from data and make evidence-based decisions? The ‘action’ piece is, how do you apply this to important problems?”

Finding cost-effective ways to create safer, cleaner and more navigable communities is one of those important problems that many data scientists are trying to tackle. “Smart cities are a big issue,” says Krishnan. “For one example, decision analytics can make new contributions to urban mobility and transportation by applying ‘smart traffic’ technology, in which a video camera monitors traffic and then adaptively changes the sequence or schedule of the stoplights, making them work together to optimize traffic flow.” In recent Pittsburgh pilots, this approach reduced urban travel times by 25 percent, Krishnan says. It also reduced emissions by 21 percent by reducing wait times at intersections.

Using Big Data to speed traffic or curb air pollution barely scratches the surface of how decision analytics can help us live healthier lives. Advances in health care analytics are yielding new strategies to measure care quality, predict clinical outcomes, reduce hospital errors and even encourage patients to stay healthy between doctor visits (for example, by prescribing exercise while wearing trackable sensor devices like Fitbit and Jawbone).

“Data analytics is truly at the cutting edge of how healthcare is evolving,” says Krishnan. “To help lead this evolution,



“BUSINESSES
MUST NOW CATER
TO A MARKET
OF ONE, AND
EACH INDIVIDUAL
CUSTOMER NOW
NEEDS TO BE
UNDERSTOOD
AND APPRECIATED
FOR THEIR
UNIQUE NEEDS.”

Heinz College works with large insurance companies as well as big healthcare providers, such as the University of Pittsburgh Medical Center, to train executives, physicians and staff to engender a culture of evidence-based thinking and policy to get the most value out of analytics.”

The mere mention of medical records, however, underscores the need for stewards to use this power wisely. Creating the human capital to thrive in the Big Data era while remaining ethical is a responsibility faced by companies in every sector.

“Developing people to use data analytics intelligently requires combining social science, data science and computer science to train folks to have a deep understanding of these new capabilities,” says Krishnan. “Our capacity to bring these disciplines together is unique at Heinz College, as our School of Information Systems and our School of Public Policy and Management function together to

produce leaders in business intelligence and decision analytics. We also work with about 100 firms and organizations every year in applied learning ‘intelligent action’ projects to solve real-world problems.”

Individual Needs for Individual Customers

In addition to training qualified people, other hurdles to capitalizing on Big Data stem from logistical factors, such as knowing where relevant data is, an organization’s dependence on its technology systems and its ability to scale them. Industries that have been awash in digital data for decades, like telecom, are seeing strain as players struggle to cope with the massive amount of information they need to process just to keep their doors open.

“Customer expectations are changing, and many telecoms are at a point now where they can’t manage the information they need to deliver the new relevant services that consumers are asking for,” says Christopher Williams, Head of Global Marketing at Amdocs, a global market leader in providing software and consulting solutions to the world’s largest communications, entertainment and media service providers. “They have amassed a tremendous amount of information stored across a variety of systems, but the analytics capabilities the companies built up over many years are no longer adequate to provide the kind of service, support and customization that customers are demanding from their telecom provider.”

The extreme customization among consumers that Big Data allows is no longer a perk; it’s the price of entry for many businesses. “With the Internet, consumers are much more empowered and are in a position of dictating the services that they want,” says Williams. “Businesses must now cater to a market of one—not to a market of many or even a few—and each individual consumer now needs to be understood and appreciated for their unique needs.”

When companies fail to deliver these personalized services, other organizations—including those from sectors never before seen as competitors—will quickly fill the need. This truth has fundamentally redefined good customer service, says Williams. To describe a series of prerequisites that businesses must now deliver in a tightly integrated manner to win and keep



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52,440	51,580	51,580	50,470	51,110	-	13,03	53	1,629	1,609	1,772	1,585	1,746	+	0.1
32,580	32,180	32,905	31,795	32,905	+	0.325	113	23,190	22,400	25,250	22,220	25,205	+	2.0
103,900	102,500	104,350	100,760	104,350	+	0.450	81	9,620	9,560	10,155	9,330	9,811	+	0.1
41,980	41,405	42,760	41,295	42,760	+	0.780	9							
23,050	22,705	23,645	22,030	23,575	+	0.525	23							
17,515	17,375	18,200	17,325	18,200	+	0.685	6	39,285	38,965	40,045	38,450	40,045	+	0.7
93,520	92,400	92,890	90,680	92,890	-	0.630	15	25,165	25,055	25,660	25,055	25,365	+	0.2
								4,050	4,065	4,174	4,030	4,162	+	0.1
								39,650	39,745	39,745	39,300	39,300	-	0.3
9,182	9,150	9,323	8,997	9,311	+	0.129	43							
19,840	19,880	20,025	19,880	20,025	+	0.185	2							
9,316	9,325	9,730	9,129	9,717	+	0.401	50	2,490	2,474	2,560	2,430	2,530	+	0.04
3,694	3,669	3,747	3,640	3,729	+	0.035	7							
40,560	40,335	41,620	40,190	41,620	+	1.060	4	32,580	32,180	32,905	31,795	52,110	+	0.32
								51,580	50,470	51,110	52,110	52,110	+	0.45
								102,500	102,500	104,350	104,350	104,350	+	0.45
								41,980	41,980	42,760	42,760	42,760	+	0.78
								102,500	102,500	104,350	104,350	104,350	+	0.52
59,100	58,500	65,040	57,450	65,040	+	5.940	133	22,705	22,705	23,575	23,575	23,575	+	0.68
30,090	29,880	31,705	29,430	31,905	+	1.815	15	17,515	17,375	18,200	17,325	18,200	+	0.68
								22,705	22,705	22,890	22,890	22,890	-	0.63

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SanDisk

Source: *As compared to 10k RPM SAS HDD with 184 Read IOPS performance and published pricing as of January 20, 2015. © SanDisk Corporation 2015. All rights reserved.

customers, Amdocs coined the term “The New World of Customer Experience.”

While targeted to telecoms, this has applicability across all industries, and is based on four fundamental principles. The first is that you must deliver an exciting new set of services to your customer. Second, those services must be wholly personalized and contextualized for every customer at every interaction point. “Not only do you need to know what I want and when I want it, but you also need to know how I want it delivered to me,” Williams explains.

Amdocs’ third principle states that the customer experience must be dynamic and consistent, regardless of how they’re accessing it. Finally, services must contain efficiencies that make them practical and cost-effective to bring to market quickly.

“Integrating these four quantifiable elements is ultimately the only long-term, sustainable source of competitive advantage, because competitors can replicate almost everything else you do,” says Williams. “It’s a secret-sauce formula that really hits what customers are looking for.” Loyalty metrics, especially the key Net Promoter Score (which measures how likely customers are to recommend a service to their family and friends), prove this.

While most business leaders are acutely aware of the do-or-die need to transform their organization’s data analytics capabilities, finding the right partner or vendor to

help achieve this transformation can be a challenge, and also pose a steep learning curve. The right vendor must not only understand the company’s industry, but also its technical and cultural barriers to change. As the global leader in the telecom space, Amdocs’ focused strengths meet these core needs for the largest communications service providers.

“Amdocs’ heritage is in the telecommunications space. Over the last 32 years, together with our customers we have designed systems and best practices to automate service providers’ business processes, and we understand the challenges in these environments very well,” says Williams. “Many telecom service providers have their most critical data in systems that we originally developed and built for them, and this gives us unique insights into how to extract and analyze that data, add relevant new information and then pull it all together with data from other sources into strategies that are actionable for the company. Additionally, many clients have us manage their environments after we build them. Currently, Amdocs already manages some of the largest enterprise data warehouses in the telecoms industry, and we are working with our customers to move to new Hadoop-based technologies that allow the efficient harnessing of this Big Data for business improvement.”

“A lot of people have called data ‘the oil

of the 21st century,’ or the new resource that’s going to drive the economy forward and create innovation,” adds Matt Roberts, Head of Big Data Analytics Marketing for Amdocs. But crude oil is useless for key practical necessities—such as fueling automobiles and planes—until it’s refined into gasoline, he points out. “Likewise, you not only need to find the right data at the right time, but refine it and get it analytics-ready in order to run your machine, and Amdocs offers targeted approaches that can meet the big challenges in accomplishing this.”

Slaying the Storage Dragon

The stratospheric storage capacities required in the Big Data era are obviously a barrier and burden to companies with overstretched IT resources. A global corporation might have a half-petabyte of data across all of its systems—that’s 500,000 gigabytes, or enough data to contain twice the entire holdings of the Library of Congress—and more gigabytes fly in every day.

However, “the failure rate for standard hard disk drives is extremely high,” says Sumit Sadana, Executive Vice President, Chief Strategy Officer and General Manager of Enterprise Solutions for SanDisk, a global leader in flash digital storage, based in Milpitas, Calif. “If a company has a data center the size of a football field, it will need people who spend a lot of time just replacing failing disk drives each day.”

BYTE BY YOTTABYTE: HOW DATA GETS BIG

Bit	The smallest unit of data that a computer uses	
Byte (B)	= 8 bits	
Kilobyte (KB)	= 1,000 bytes	
Megabyte (MB)	= 1,000,000 bytes	
Gigabyte (GB)	= 1,000,000,000 bytes	
Terabyte (TB)	= 1,000,000,000,000 bytes	= 1 thousand gigabytes
Petabyte (PB)	= 1,000,000,000,000,000 bytes	= 1 million gigabytes
Exabyte (EB)	= 1,000,000,000,000,000,000 bytes	= 1 billion gigabytes
Zettabyte (ZB)	= 1,000,000,000,000,000,000,000 bytes	= 1 trillion gigabytes
Yottabyte (YB)	= 1,000,000,000,000,000,000,000,000 bytes	= 1 quadrillion gigabytes

“IF A COMPANY HAS A DATA CENTER THE SIZE OF A FOOTBALL FIELD, IT WILL NEED PEOPLE WHO SPEND A LOT OF TIME JUST REPLACING FAILING DISK DRIVES EACH DAY.”

IT leaders have long known that the failure rate of flash storage—the chip-based memory found in cellphones, thumb drives and solid state drives (SSDs)—is much lower than that of rotating hard drives. But historically, with the cost of flash hovering at two to three times that of hard disk drives, many businesses have been reluctant to implement flash storage at a large scale, despite the numerous advantages it offers beyond superior reliability and performance.

That price barrier is now effectively gone. “Today, flash can effectively be deployed at the same cost structure as a hard disk drive solution in many applications,” says Sadana. The media itself is still more expensive than that of hard disk drives, but flash offers efficiencies and reductions in data center infrastructure that greatly lower the upfront investment as well as the long-term costs—i.e. the performance factor of flash allows companies to drastically shrink their data center footprint. One of the dirty secrets of data centers is that a staggeringly large percentage of servers are underutilized because data simply can’t be delivered to them fast enough due to the bottleneck created by hard disk drive-based storage systems. These servers are literally waiting around for work.

“Right away, you can cut the number of servers by up to 50 percent—and fewer

servers means fewer software licenses, less rack space and lower maintenance costs,” says Sadana. “You can also reduce the total storage footprint because virtually all of the capacity in flash systems gets utilized. Flash also consumes dramatically less power than 15K RPM hard drives, and that’s important, as Big Data is causing the power consumption and associated costs in data centers to skyrocket.”

These savings come with a major boost in speed and performance, too. “Flash memory is more than 100 times faster than hard disk drives,” Sadana explains. This doesn’t just mean increased network speed and faster core business functions—it also allows for new approaches to solving existing challenges. For example, faster data analytics enabled by flash can allow credit card companies to quickly identify fraudulent credit card usage. “Any application that requires fast access to lots of data can benefit from leveraging flash at scale,” Sadana adds. With flash, the data needed to detect and analyze suspicious activity can be accessed much faster, allowing speedier processing during a fast-moving breach by a sophisticated hacker.

While CIOs and IT decision-makers have known that the total cost of ownership for flash is lower than for hard disk drives, only recently have the acquisition costs reached parity. “That’s a big change we’ve created in the marketplace,” says Sadana. “Our new InfiniFlash mass-storage solution, for example, offers five times the capacity, four times the reliability and 50 times the performance of hard disk drive solutions, while it consumes 80 percent less power. This technology used to be very expensive, and we’ve created waves in the marketplace by shattering the \$1 per gigabyte price barrier for raw, uncompressed flash storage.”

SanDisk has strong relationships around the world with server vendors like HP, Dell and Lenovo, so many companies are already using their solid state drives. “We work with many large companies to help them meet the challenges of today’s dramatic increases in data,” Sadana adds. “We can help them implement full-system solutions that make their storage more resilient, while dramatically simplifying their infrastructure.”

With Big Data pulling us ever closer to the day when the IT department talks in exabytes, simpler is no small feat.

— Ron Geraci

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A distressed denim jacket is the central focus, hanging vertically. The jacket's fabric is heavily worn, with frayed edges and a mottled blue and white color. It is positioned against a background that is a composite of three elements: the top half features a close-up of the stars and stripes of an American flag, while the bottom half shows a weathered, light-colored wooden wall with dark, vertical streaks and textures. The overall aesthetic is one of ruggedness and history.

Distressed Denim

**At 162
years old,
Levi Strauss
confronts
the yoga
pant**

**By
Tim Higgins**

**Photographs by
Justin Kaneps**



At the foot of Telegraph Hill in San Francisco, in a renovated grain mill with soaring ceilings and wooden beams, Bart Sights is refining his recipes for denim. In his hands, stained dark blue from day after day of plunging fabric into buckets of indigo dye, he holds a list of steps for creating a particularly vexing style: women's skinny jeans. Most such jeans contain so much synthetic fiber they appear slick, cheap, and unlike real denim. Sights has been searching for a way to give the fabric just the right amount of stretch, in just the right places—enough to flatter the figure, but not so much that they stop looking like jeans.

Sights is Levi Strauss's senior director for technical innovation, and the Telegraph Hill space is the company's research and development lab. There, Levi's is overhauling its namesake brand's entire women's line. The company, founded in 1853, has survived the Civil War, the Great Depression, and other epochal threats, but in the last two years it's been tormented by an enemy none of its executives saw coming: yoga pants. "I don't even say the words," Sights says. Comfortable and flattering at the same time, athletic pants last year sold in about equal numbers to jeans for the first time in the U.S., according to market researcher NPD Group, as revenue from women's jeans fell 8 percent. At Levi's, the yoga pants scourge is especially vexing, disrupting a turnaround plan by a new chief executive officer that had been showing signs of success.

Sights, 50, has a closely shaved head and the soft remnants of a Kentucky accent. In his lab, he points to a pair of men's jeans purchased from a second-hand market in Thailand, possibly worn by a construction worker or roofer, that he wants to recreate for the women's line. Years of sweat, dirt, and stress have created a pattern as unique as a fingerprint; deep whiskers mark the upper thigh, and strips of blue have faded like paint on an old barn. Artificially reproducing the wear is easy, done with sandpaper, oxygen baths, and rocks. "The trick," Sights says, "is to get a look like this on a very modern fabric—a fabric with a lot of stretch in it."

His new technique, inspired by the makeup industry, is called contouring. Sights uses lasers to etch away the top layer of indigo, highlighting the center of the leg so the inner and outer thighs appear to recede into the background, helping the leg look slimmer. The whisker patterns on the thighs are applied in a way that draws the eye away from the edge of the hips, while chevrons run along the



legs to give an elongated impression.

The finishing comes on top of new materials that Sights and his team have helped develop. It's not as simple as putting more stretch into the denim. They don't want to make yoga jeans. They want to make jeans that are more comfortable, yet retain their 19th century essence. For Levi's, a company whose riveted trousers can be found at the Smithsonian, the entire notion of innovation is ticklish. "There's not another piece of apparel in the world—probably in the history of mankind—that has remained virtually unchanged and still provides function," Sights says. "Pride in what you're wearing. Beauty." But if the tenets of denim are immutable, the way Levi Strauss sells jeans has been long overdue for a change.

Two decades ago, Levi's was bigger than Nike, with revenue exceeding \$7 billion. Sales have since sagged to \$4.8 billion. The company is privately owned by its founder's heirs,

and the luxury of not having to answer to public shareholders has helped make Levi's slow to respond to change. For a long time, that didn't matter—Levi's had built a machine that churned out familiar jeans for large department stores and customers with predictable tastes. Fifteen years ago, about half of the company's revenue came from its 10 largest U.S. customers. As those businesses declined—with many department stores folding or consolidating—so did their sales of Levi's jeans. Levi's now gets a quarter of its revenue from 550 company-owned stores around the world and from the Web, up from just 4 percent in 2006. "They weren't a dynamic business for the longest time," says Greg Ellis, who follows the industry for consulting firm Kurt Salmon. (Levi's debt is publicly traded, and several analysts track the company.) "When they started expanding their stores, that's when they started to think about being fashionable and participating in the top end of the market and keeping up with the style changes."



Sights's desk at the San Francisco lab—and his indigo-stained fingernails.

Levi Strauss net revenue



Lululemon net revenue



A new CEO, Chip Bergh, arrived in late 2011 from Procter & Gamble, where he ran the \$7 billion male-grooming division and helped introduce the Gillette Fusion razor. Bergh's mandate at Levi's, as he puts it, was "to take on the challenge of reinventing an iconic American institution and make the company great again." He embraced jeans culture, telling a conference audience that he hadn't washed the denim he was wearing in a year. (The style tip, meant



came in three different kinds of curve—slight, demi, and bold—as well as different colors, rises, and leg openings. Wholesale buyers, unhappy about having to carry so much inventory and explain the myriad choices to customers, began dropping Curve ID jeans.

The bigger problem with the line was that Levi's misread stretchy pants as a trend when they were more like a clothing revolution. Yoga pants' rise is nearly synonymous with that of Lululemon, a Vancouver company that got its start in 1998 and whose market capitalization is now \$9 billion. Women have long since worn yoga pants out of the vinyasa studio,

finding them perfectly suited for a run to the grocery store, hanging out at the park, and attending a lecture. Yoga pants aren't merely soft, or tight in the right places. They feature advanced materials that boost women's figures; they last a long time; and they manage to be both stylish and casual.

Levi's missed the appeal. "As we saw 'casualization' continue even further, the customer basically told us that they had enough denim until something really unique and innovative came along," says Marshal Cohen, an analyst at NPD. "We really saw the denim industry and denim retailers basically turn their nose up on the customer and say, 'We don't

"We really saw the denim industry and denim retailers basically turn their nose up on the customer"

Artificially distressing jeans made of new, stretchier materials.



to help jeans age gracefully, went viral. "That'll go on my tombstone, I suspect," he says.) Bergh, 57, replaced 9 of 11 senior executives, including hiring Karyn Hillman as chief product officer from Calvin Klein, and announced plans to cut as much as \$200 million in annual costs by the end of 2016. He encouraged basic processes such as market research, sending executives to interview customers around the world. And he decided to make women's jeans a priority. While many clothing makers get the bulk of their business from women, Levi's gets just 23 percent, according to an SEC filing. The company says it has a quarter of the global men's jeans market, and only 5 percent of women's. To the business jargon-spewing Bergh, the category was "a big, big upside opportunity," the obvious place to focus. Women were still buying denim, as any visit to a Rag & Bone boutique would attest. They just weren't buying Levi's.

Bergh had inherited a complicated women's product line, introduced in 2010, with a feature called Curve ID. Every size

care what you really want, we're going to tell you what you want."

In late 2013, when Bergh was two years into his turnaround effort, Levi's sales started to feel the impact of "athleisure." "We're scrambling," Bergh told analysts in February 2014 with a bluntness rarely heard from a CEO. "I mean, there is a big difference between the product that we've got on the floor today and what the consumer is looking for. And we just flat-out missed it." The company's sales of women's jeans fell by at least 10 percent at major U.S. retailers in the second quarter of the year, he said at the time.

By the summer of 2014, with sales of athletic pants rising 62 percent from 2010—and athleisure apparel looking less like a fad and more like a permanent addition to women's closets—retail journalists began writing obituaries for women's denim. Eva Mendes, the actress and style icon, spoke for many women this spring when she told a fashion blog that if she was seen wearing jeans, it could only mean that her softer pants were dirty.

Shoppers such as Kate Slattery, 25, a data scientist in San Francisco, one of dozens of women interviewed for this story, says she hasn't bought a new pair of jeans in more than a year but did splurge on a pair of Lululemons. She loves their clever pockets. Asked for her take on Levi's, Slattery draws a blank. "My view of Levi's is probably 15 years old," she says, "because I just haven't even considered shopping there since my mom shopped with me."

In 2012, Bergh made a trip to Corlu, Turkey, a textile town about 70 miles west of Istanbul, where Levi Strauss opened a research and development lab in 2009 at an old factory. There he met Sights, who ended up in the denim business out of college in the late 1980s when the industry was looking for commercial laundries to stonewash jeans. His family happened to own such machines in Henderson, Ky. "We had no idea," he remembers of those first inquiries about washing denim. "What, are they dirty?" Sights developed an expertise that would take him around the world as his family's company expanded to distress denim for Levi's, Lee, Tommy Hilfiger, and other major brands. By 2009, tastes had changed and clothing makers had shifted production to low-cost countries. The family's company stopped production. Sights began consulting with denim mills in India, and in March 2010, Levi's hired him to run the facility in Corlu.

That Levi's would base its R&D almost 7,000 miles from headquarters says a lot about how the 162-year-old



Workers load jeans onto inflatable legs to experiment with creating different distressed looks. The best techniques, known as "recipes," are then replicated on a larger scale.



company valued innovation, or didn't. The lab technically reported to a regional office in Brussels. Designers from San Francisco visited only every six months, for two-week stays. The travel around the world was long and filled with pressure to make each trip worthwhile, which had a predictably stifling effect on creativity and collaboration. Three-quarters of the work wouldn't end up in the product line, Sights says. In the interim, designers would ship samples between the continents. "We probably spent enough on airfare to buy a 747 just to be managing product back and forth over the ocean," Bergh says. He finally relocated the lab to San Francisco in April 2013.

Designers borrowed the cosmetics concept of "contouring" to make legs look skinnier.



On the floor of the lab during a recent visit, 14 pieces of the new women's line are spread out in a dull spectrum of light and dark blues, blacks, and grays. The new fabrics needed to do many things. The designers wanted comfortable, forgiving materials that could reduce the number of patterns used previously to accommodate different body types. Adding stretch into denim, though, can make it lumpy or baggy in tight spots, such as the waist and knees. So the material

also needed long-lasting recovery.

Sights's team began tearing apart wet suits and other unconventional garments. "Neoprene is supercomfortable in the water because it allows movement, but it's also superforgiving, it recovers well," he says. "And there are some fibers in lingerie that bring these really valuable comfort attributes."

The line reduces the number of master patterns required from 65 to about 30—closer to the men's business—and is part of Bergh's mission to cut costs while helping the company respond to trends faster. If, say, skinny jeans with less stretch material become popular, Levi's can adapt.

The core of the line is called Lot 700, a nod to the original women's jean, Lady Levi's Lot 701, introduced in 1934. The new one features the retro "Two Horse" leather logo patch on the rear waistband and adds larger back pockets to accentuate the seat. Another style, Lot 300, uses a more girdle-like design for a different shaping effect. The 501ct can be worn in a looser fit.

To blunt its sales decline, Levi's rushed some of the new materials that Sights was working on to market in the summer of last year, infusing skinny and midrise jeans with additional soft and stretchy material. "I can vouch for the stretchy women's jeans, because I bought a pair this year and have been selling it to my friends," Carla Casella, an analyst at JPMorgan Chase, said on a conference call with executives earlier this year. Harmit Singh, the chief financial officer, replied, "Only one color? You should buy more."

"I work," Casella said. "I don't get to wear my jeans every day at JPMorgan."

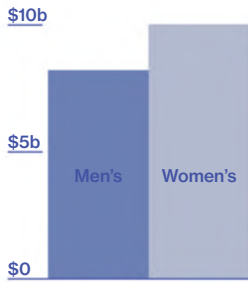
"My view of Levi's is probably 15 years old, because I just haven't even considered shopping there"



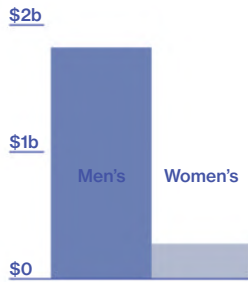
The new jeans on display.

Levi's finally introduced the new women's line earlier this month, at an event in Manhattan's clubby Meatpacking District. Large photo-

U.S. jeans market



Levi's U.S. product sales



graphs displayed up-and-coming female artists wearing Levi's, and six models stood like mannequins wearing the Lot 700 line. Holding court near the door, James Curleigh, Levi's president, said he expected the women's reboot to help the company increase wholesale prices over

would respond to the new Levi's, I sent an e-mail to Slattery, the woman who hasn't considered the brand since she was a child, asking if she'd go to a San Francisco store that was test-selling the jeans. She agreed, and a few days after the launch party, she walks to a back

the next three years. Macy's is doubling the amount of space for the brand in its flagship store in Manhattan and adding floor space at stores across the U.S., according to Louis Mastrogia-
 como, who manages the women's ready-to-wear category for Macy's.

Curious about how consumers

wall with shelves stacked with the latest offerings. Slattery asks an employee for a dark-blue 711, the new skinny fit, and a 712, the slim cut. A few minutes later, she emerges from the dressing room wearing the latter. "They fit perfectly—I'm surprised," she says. "They fit nice, and they're comfortable."

Slattery returns to the dressing room to try on the other pair and comes out with a look of surprise. The skinny fit feels like a favorite pair of going-out pants, she says, and are more comfortable than the soft work pants that she wore to meet me. The fabric is supple, yet it feels like denim, she says. While not yet willing to abandon yoga pants, Slattery says she'll definitely consider Levi's the next time she needs a new pair of pants. "I had this idea of Levi's just being looser jeans, so this is kind of surprising to me," she says. "They're good." **B**





The van had a twin mattress on a sawed-off Ikea frame with built-in shelves underneath, handmade green curtains, wood panels, and blue velour. “The thing is a V8. I’d shred my environmental credentials if I drove it,” says Discoe.

THE MAN WHO LIVED AT GOOGLE

Thirteen months of working, eating, sleeping, and bathing at the Googleplex.
The saga of Ben Discoe

By Joel Stein

GIVING UP THE HOUSE KEY MAKES IT BRAVE. Anyone can sleep in the office for a night, a few nights, even most of the time. But to remove the option of escaping the office entirely—that’s what makes it heroic in Silicon Valley. And Matthew Weaver is always ready to be a hero.

Like, for instance, when U.S. Department of Veterans Affairs Secretary Robert McDonald came recruiting last year for coders willing to provide their services to their country, promising that his hires could create their own titles. Weaver took the job and then told his new boss, “Bob, this is the part where I hold you to your word.” Weaver is now Rogue Leader of the Digital Service for Veterans Affairs.

Or there’s the time in 2005, when Weaver, then a 27-year-old “site ecologist” at Google, decided on a friend’s dare to do away with his 90-minute commute by living out of an RV in the Google parking lot. Other Googlers had been known to sleep on-site for a few days or weeks. To win the dare, Weaver had to last a full year. He did, and his record stood for about five years. Then Ben Discoe, another programmer, arrived at Google knowing nothing of Weaver’s feat. “An RV?” Discoe says when asked about it recently. “That’s cheating.”

In Silicon Valley mythology, sleeping at the office is second only to working out of a garage. According to a new biography by *Bloomberg Businessweek* staff writer Ashlee Vance, Elon Musk dozed on a deskside beanbag at one of his startups and showered at a YMCA, where he kept a change of clothes in a locker. Like many tech founders, Box Chief Executive Officer Aaron Levie worked out of his home, hiring people to work there until home wasn’t big enough. When the company moved to a bigger office, he took his bed. “I don’t think there was any downside,” he says. “I don’t think in any circumstance I would have been able to date anybody anyway, being pretty uncool and working all the time.”

While it makes sense for a founder to work where he lives, then live where he works, it’s a little different for software programmers, for whom giving up the key is less about devotion to a company than the quality of their code. “All of Silicon Valley is based on character defects that are rewarded uniquely in this system,” says Po Bronson, the author of *The Nudist on the Late Shift*, his 1999 study of Valley social mores, which included a photo of Yahoo! co-founder David Filo curled up in a sleeping bag beneath his desk after he was already a billionaire. “The utilitarian mind that gets them to code and think about things logically would say, ‘What’s the difference between sleeping on a bed and



Sleeping in the office is as Silicon Valley as startups in garages. Elon Musk used to sleep on a deskside beanbag.

“Only a fool would pay rent in the Bay Area,” says their programming. They



Yahoo! co-founder David Filo slept beneath his desk some nights, even after he was a billionaire.

sleeping on a carpet? This is just a realm of convention.’”

When Weaver broke with convention, he bought a 24-foot 1995 Safari Roadtrek RV and parked it in Google’s lot, next to a building named Pi. He put some AstroTurf outside his door, surrounded it with a white picket fence, and invited co-workers to hibachi barbecues and regular Thursday evening cocktails. He ate the free Google meals, used the Google bathrooms, and showered in the Google gym.

Weaver got friendly with security. He dated when he was out of town. Sure, there were challenges. It turns out that RVs aren’t very insulated against cold and rain, the way most homes are. And it gets colder in Mountain View, Calif., than he expected. “Every exterior surface was a place where condensation happened,” he says. “Every wall, every window—they would all be coated in running moisture.” But minor inconveniences weren’t going to get between an engineer and his dream. “For a few months, I kept all my clothes in sealable plastic boxes and rotated a set of desiccants from the office,” he says. “You know, those silica ‘do not eat’ packages?” Weaver made it 54 weeks before finally moving to an apartment. (Google declined to comment for this article.)

Discoe, 44, lived at Google for 56 weeks, from October 2011 to November 2012. He has a long gray ponytail and clear blue eyes and is wearing an old T-shirt from the 1990s, back when he threw a lot of raves. He barely glances at the cocktail menu of an Oakland restaurant called *Hopstutchers* before choosing an ectoplasm. He can’t resist the *Ghostbusters* reference.

In the interest of efficiency, he hands me his Samsung smartphone to save time describing himself. On the cracked screen, there’s a comic strip about how your favorite type of map reveals your personality. Discoe is a hard-core fan of the Dymaxion Map—Buckminster Fuller’s way of flattening the globe into a 20-sided mess that shows the earth’s land-mass contiguously. The cartoon caption reads: “You like Isaac Asimov, XML, and shoes with toes. You think the Segway got a bad rap. You own 3D goggles, which you use to view rotating models of better 3D goggles. You type in Dvorak.”

Discoe points at the screen. “When I read this, I was like, ‘Does he know me?’ There’s only really me who fits this description. All my other socks are toe socks,” he says, excusing the regular socks he’s wearing with flip-flops. “I need to do laundry.”

In 2011, Discoe was newly divorced. The paradise he had planned with his wife when they moved from Manhattan to

rural Ahualoa, Hawaii, to raise children in the same house he grew up in, fell apart before the kids came. He had alimony and a mortgage on the Hawaiian farm and had recently moved to the Bay Area to take a job at 510 Systems, working on a driverless car. (Discoe found that ironic, since as a resolute environmentalist he loathed cars and always biked to work.) In 2011 employees voted on whether to let Google buy the company. “My vote was to get bought by Google,” he says. “That’s like winning the freaking lottery.”

The only problem with the lottery win was that it meant paying rent in the South Bay. Sure, even paying alimony, he could afford a \$2,000 apartment; he was earning a salary of \$135,000. It just didn’t seem logical. “Only a fool would pay rent in the Bay Area,” he says. “People are curiously inflexible and locked into their programming. They want respect from their peers and to be considered normal. I never sought those things.” He picks up a handful of shredded, fried sweet potato with his hand and stuffs it into his mouth.

Looking back, Discoe’s childhood could be said to have prepared him to live out of a vehicle. His parents, in their second marriage of four apiece, met in Berkeley and got involved in Zen. His dad became a Buddhist priest and moved the family to the Hawaiian countryside. After the divorce, both of his parents moved back to Northern California; when he was 7, he moved again to Hawaii. He was one of the only white kids, and by far the nerdiest. It was so socially uncomfortable he persuaded his mom to home-school him. Then, when he was 10, his dad gained custody and moved him to Mill Valley, Calif. In Discoe’s online bio, he writes that his years in Mill Valley were a time of “total alienation at school for being smart, long sickening school bus trips and general, all-around misery.” He moved back to Hawaii for the last three years of high school, and it wasn’t any better. He got into Caltech based on the programs he had written but dropped out after two years, unable to keep up after a lifetime of not focusing on school.

When you move that much, immerse yourself that deeply



A guy once lived for 54 weeks out of an RV parked at Google. He put some AstroTurf and a white picket fence outside his front door. “An RV? That’s cheating,” says Discoe.

Discoe. “People are curiously inflexible and locked into want respect from their peers and to be considered normal. I never sought those things”

in computer coding, and are raised Zen, you don't care about possessions. For a long time, Discoe owned one pair of shoes. When he became a Google employee and rejected the idea of getting an apartment, he realized that all his stuff could fit quite easily in a van. He went on Craigslist and paid \$1,800 for a white 1990 GMC Vandura.

Google's internal Wiki, now defunct, had an entry on “Living at Google.” Like a few of the people who offered tips on the page, Discoe put a twin mattress in the back of the van, sawed 2 inches off an Ikea frame, and built some shelves underneath it. The Vandura was a “burner van” that had taken many trips to Burning Man and had been custom-fit with hand-made green curtains, wood panels, and blue velour. It never moved from its parking space. “The thing is a V8. I'd shred my environmental credentials if I drove it,” Discoe says.

He not only ate free but also as healthily as he ever had, preferring Google's Café 150, which sources all of its organic ingredients within 150 miles. “If you're bored of Google food, just move on to another restaurant,” he says of the 25 places to eat on campus. “It was awesome.” He charged his phone, tablet, and laptop in the office. If he needed the bathroom in the middle of the night, he would badge back into the building. Other than his mobile phone bill, Clipper card for public transportation, and laundry service, his living expenses were close to zero.

Unlike Weaver, Discoe didn't invite people to barbecues or cocktail hours. He parked by Permanente Creek, which runs through the Googleplex, and the few people at work who found out about it would always break into the same impression of Chris Farley as a motivational speaker on *Saturday Night Live*: “I am 35 years old! I am divorced! And I live in a van down by the river!”

It wasn't the happiest existence, especially when Discoe thought of Hawaii. “I was sad, missing my home and my community and my chickens and my tea,” he says. “Being in a corporate parking lot far from my home is sad that way. I could talk for hours about my chickens. The sustainable future of humanity is not possible without chickens.”

Discoe kept his van life up through the cold winter to save money to pay off his farm and retire early, which he's on track to do next year. His farm, he believes, is one of the few places that will be fine when the environmental dystopia slowly arrives. “It was all about being able to afford a place for my grandchildren,” he says about avoiding rent. The irony is that it was hard to find a woman who wanted to have kids with a guy who slept in a van.

He didn't mention living in a parking lot in his OKCupid profile, though he worked in the fact that he owned a farm in Hawaii. “You mention the van on the third date, once there's an emotional buy-in,” he says. He always waited until after he dropped the “G-bomb” about his employer. “My little running joke was, ‘I keep a little place, close to work.’” When dates went well, he went to their place. Almost always. “One girl wanted to make out—not full sex but just make out,” he says. “The bed groaned. It was not really meant for two people.”

Google wasn't the first office where Discoe slept. When he worked at Intel's graphics workshop lab in 1997, he laid some cardboard down on the floor of his cubicle, put some silk around the bottom, hung a disco ball, put one of those soothing Zen water fountains on top, and slept in a sleeping bag. He stayed at his girlfriend's house a lot and even got her to come to “his place,” though they didn't have sex. “She was a pretty cool

raver girlfriend to be even down with sleeping there,” he says.

In 2012, when Google transferred Discoe to a job he found boring, he left, landing at Leica Geosystems, in San Ramon, Calif., where he works in mapping. Even without the company's infrastructure, he continued to live in his van, parking outside the Hacker Dojo—a giant co-working space in Mountain View with cheap membership that Discoe calls “a halfway house for overqualified geeks.” There were four other coders sleeping in vans in the parking lot.

“Finally,” Discoe says, “I wasn't alone.”

When he did get a long-term girlfriend, she made him move to an apartment, which he wasn't happy about. “Two



At Intel, Discoe slept under his desk after accessorizing with silk, a Zen fountain, and a disco ball.

freaking thousand dollars to rent basically a basement in the Mission District. Freaking insane,” he says. “She never even went there. We broke up.”

He has another girlfriend now, one he hopes will move with him to Hawaii and make babies and help him sell the tea he grows himself and roasts in his mom's wok. They live together in a place with four walls in Oakland, though he still has the van. As our dinner wraps up, Discoe ties his hair back into a ponytail and leaves to go meet his girlfriend at San Francisco International Airport. She's been gone for two weeks. “I've had no reason to come home after work,” he says. “So I've been sleeping in the van.”

Living entirely inside the Google office building can't be done, he says. “There's no comfort or privacy, and the vacuum cleaner comes at 2 a.m. Those Google nap pods are a joke. It's an awkward bench with a cone over your head. It couldn't hold a candle to the van.”

But on Quora, the online forum for specialist knowledge, a senior engineer boasts of having indeed lived inside Google for more than a year. Overlapping with the period Discoe was by the creek in his van, the poster claims to have spent 13 months sleeping in a combination of nap pods, beanbags, meditation rooms, massage rooms, and every windowless conference room with a sofa. The engineer wishes to remain anonymous. ❸

OK\$6

By Joshua Hammer
Photographs by Eriver Hija

Inside Germany's billion embarrassment



Breaking ground in September 2006



The inspectors could hardly believe what they were seeing. Summoned from their headquarters near Munich, the team of logistics, safety, and aviation experts had arrived at newly constructed Berlin Brandenburg International Willy Brandt Airport in the fall of 2011 to begin a lengthy series of checks and approvals for the €600 million (\$656 million) terminal on the outskirts of the German capital. Expected to open the following June, the airport, billed as Europe's "most modern," was intended to handle 27 million passengers a year and crown Berlin as the continent's 21st century crossroads.

The team of inspectors, known as ORAT, for Operations Readiness and Airport Transfer, brought in a dummy plane and volunteers as test passengers. They examined everything from baggage carousels and security gates to the fire protection system. The last was an especially high priority: None could forget the 1996 fire that roared through Düsseldorf Airport's passenger terminal, killing 17.

When they simulated a fire, though, the system went haywire. Some alarms failed to activate. Others indicated a fire, but in the wrong part of the terminal. The explanation was buried in the 55-mile tangle of wiring that had been laid, hastily, beneath the floors of the building where ORAT technicians soon discovered high-voltage power lines alongside data and heating cables—a fire hazard in its own right. That wasn't all. Smoke evacuation canals designed to suck out smoke and replace it with fresh air failed to do either. In an actual fire, the

inspectors determined, the main smoke vent might well implode.

Confronted with the fire system fiasco, Rainer Schwarz, chief executive officer of Flughafen Berlin Brandenburg (FBB), the airport company owned by the city of Berlin, the state of Brandenburg, and the federal government, downplayed it. Schwarz and his staff told the airport's board of oversight, as well as Stephan Loge, the commissioner of Dahme-Spreewald County, who had the final authority to issue the airport an operating license, that they were working through some issues, but that the situation was under control. Schwarz also appointed an emergency task force to propose solutions that would allow the airport to open on time. In March 2012 the group submitted its stopgap: Eight hundred low-paid workers armed with cell phones would take up positions throughout the terminal. If anyone smelled smoke or saw a fire, he would alert the airport fire station and direct passengers toward the exits. Never mind that the region's cell phone networks were notoriously unreliable, or that some students would be stationed near the smoke evacuation channels, where in a fire temperatures could reach 1,000°F.

It was, says Martin Delius, "an idiotic plan." Delius is a physicist and member of Berlin's parliament who has conducted an extensive investigation of the airport's troubled infrastructure. "They thought that this would at least eliminate the need for

wiring," he says, "because [the spotters] could see with their own eyes if there is a mass of smoke lower than 6 feet above the ground."

Schwarz continued to prepare for the opening, and the German public remained oblivious. By April 2012, airport fever was consuming Berlin. Mayor Klaus Wowereit sent out 3,000 invitations for the Hoffest, the annual mayoral ball at the 19th century City Hall, printing the entry tickets on mock boarding cards. Billboards went up, showing a photomontage of the airport's namesake and famous Cold War leader embracing passengers, with the legend, "Willy Brandt greets the world!" Preparations continued for an extravagant inaugural. Angela Merkel, the chancellor, was to disembark from a government jet and stroll down a red carpet to the glass-walled terminal, which would have been filled with expensive food and drink. On the night of June 2, in a stunt-like mobilization, thousands of workers would shuttle 600 truckloads of equipment and a fleet of 60-ton aircraft tugs 19 miles down a sealed-off expressway from Berlin-Tegel, Berlin's main airport, in the northwest corner of the city, and Tegel would shut down forever the same day the new airport came online.

But in the town of Lübben, in what used to be East Germany, Commissioner Loge





Spends €16 million month just to maintain the unfinished facility

800 people wearing orange vests, sitting on camping stools, holding thermoses filled with coffee, and shouting into their cell phones, ‘Open the fire door?’” Loge refused the airport an operating license. Schwarz stood up and walked out without another word.

The next day, in a hall packed with government officials and journalists, Schwarz sat grimly behind a table with four other officials, including Mayor Wowereit, and announced the unthinkable: The airport wouldn’t open as scheduled. The inaugural bash and overnight move from Tegel were scuttled.

It was merely a prelude to a debacle that is still unfolding. Three years later, Berlin Brandenburg has wrecked careers and joined two other bloated projects—Stuttgart 21, a years-late railway station €2 billion over budget, and an €865 million

concert hall in Hamburg—in tarnishing Germany’s reputation for order, efficiency, and engineering mastery.

At the very moment Merkel and her allies are hectoring the Greeks about their profligacy, the airport’s cost, borne by taxpayers, has tripled to €5.4 billion. Two airport company directors (including Schwarz), three technical chiefs, the architects, and dozens if not hundreds of others have been fired or forced to quit, or have left in disgust. The government spends €16 million per month just to prevent the huge facility from falling into disrepair. According to the most optimistic scenarios, it won’t check in its first passengers until 2017, and sunny pronouncements have long since given way to “catastrophe,” “farce,” and “the building site of horror.” There is a noted German word for the delight some took in the mess, too.

In the beginning, Berlin Brandenburg airport was at best an economically unnecessary symbol of unity and growth. In October 1990, when politicians and planners began a search for ways of bridging the city’s long East-West divide, Berlin had three modest-size airports: Tempelhof, famed as the site of the 1948 Berlin Airlift; Schönefeld, opened in 1946, which later became the main airport serving Communist East Germany; and Tegel, a gem of efficiency that opened in 1948. By 1995 about 12 million people flew in and out of the city each year. After years of languishing as a Cold War backwater, Berlin was on the rise. By 2020, passenger totals were projected to reach 22 million.

In 2001, Wowereit sensed an opportunity. A gray-haired extrovert

had his doubts. He and his own staff of building inspectors had spent many hours examining the fire protection system at the Tropical Islands Resort, an indoor paradise set in a former airship hangar in Brandenburg. One of the world’s largest free-standing structures, it draws up to 6,000 warmth-and-beach-deprived Germans a day. “It was far more complicated than the one at Berlin Brandenburg airport, and it worked,” Loge says.

On May 7, less than four weeks before the scheduled opening, Loge met with Schwarz for the first time. The airport, Schwarz conceded, would have to open using the army of human fire detectors.

“Professor, let me understand this,” Loge said. “You are talking about having

who bears a certain resemblance to the actor Alec Baldwin, “Wowi,” as he’s known, had earned a reputation as both a party animal and a rainmaker. He attracted free-spirited events to the city, such as an international S&M fetish street party, and proudly proclaimed, “I’m gay, and that’s a good thing.” “Is Germany Ready for a Gay Chancellor?” *Der Spiegel* asked after the Social Democrat’s landslide reelection in 2006. The Berlin Brandenburg Willy Brandt Airport was to be his legacy in the city, while possibly paving the way for national office. (Wowereit declined to be interviewed for this article.)

To design the airport, FBB landed Meinhard von Gerkan, Germany’s most famous architect, a septuagenarian with a mane of white hair who’d made his name at age 30 with the Tegel Airport. The founding partner of Hamburg-based firm von Gerkan, Marg, & Partners, he’s known to squabble publicly with project managers when he feels that his artistic vision has been compromised.

The third key player was Schwarz, who was appointed CEO of the airport management company in 2006. A U.S.-trained economist who’d run Düsseldorf Airport, Schwarz had a reputation as a cost-cutting technocrat—just the man for the job. After considering a half-dozen sites, including a former Russian army base, the airport management team from FBB broke ground in 2006 on a vast plot just a couple of miles from the existing runways at Schönefeld.

The project’s first complications stemmed from Schwarz and Wowereit’s ever-changing ambitions. With construction under way, Schwarz, seizing on increasing forecasts for air traffic (up to 27 million passengers at that point), had von Gerkan add north and south “piers” to the main terminal, turning it from a rectangle into a “U” and dramatically enlarging the floor space. Schwarz also dreamed of making the airport a Dubai-like luxury mall. Airports earn significant money from nonaviation businesses, the FBB boss noted, so why not insert a second level, jammed with shops, boutiques, and food courts? Von Gerkan derided what he called the *Vermallung* of the airport—its “mallification”—but he capitulated to Schwarz’s demands.

According to Boris Hermel, a TV and radio correspondent who has covered the airport saga from the beginning, and other sources, Wowereit and Schwarz fell hard for an airplane: the Airbus A380, the double-decker, widebody, four-engine jetliner capable of seating 853 people. While no airline indicated it wanted to fly this monstrosity to Berlin, the men called for the walls at one end of the terminal to be ripped out so that an extra-

Here Today, Gone Tomorrow

Rainer Schwarz
After being fired in 2013, the airport company CEO sued for wrongful termination and was eventually awarded €1.14 million

Meinhard von Gerkan
Fired in 2012, the architect wrote a tell-all the following year laying blame on others

wide gate could be built to accommodate it. “The clients were tripping over each other with requests for changes,” von Gerkan later said.

In his investigation, Delius examined tens of thousands of internal FBB e-mails. “The people responsible for technical oversight were saying, ‘We cannot do this within this amount of time,’ and Schwarz would answer, ‘I don’t care,’” he says.

The architecture and engineering teams fought to keep up. As the terminal ballooned from 200,000 to 340,000 square meters (dwarfing Frankfurt’s 240,000 and just shy of Heathrow Terminal 5’s 353,000), they parceled out the work to seven contractors. That soon grew to 35, and they brought in hundreds of subcontractors, says Delius. Several engineering and electronics companies, led by the German giants Siemens and Bosch, struggled to retain control over the complex fire protection system that included 3,000 fire doors, 65,000 sprinklers, thousands of

smoke detectors, a labyrinth of smoke evacuation ducts, and the equivalent of 55 miles of cables.

“Our part, the detection of hot air or smoke ... is functioning,” says Thilo Resenhoeft, a Bosch spokesman. “The responsibility for the dysfunction lies with somebody else.” Siemens spokesman Oliver Santen confirms that the company was originally responsible for building the “automated fire protection facility” and “the control unit for fresh-air circulation.” Testing in 2013 “showed the need for reworking part of the system,” he says. Santen declines to attribute responsibility other than to say that Siemens is “responsible for the reconstruction of the fresh-air circulation system.”

Each addition ordered up by Schwarz required shifting passenger flows through the terminal. That meant rebuilding walls, exits, emergency lights, ventilation



SCHWARZ, DANIEL PILAVI/REDFX; GERKAN, JOERG MORDOWIA/REDFX; WOWEREIT, RAINER UNKE/REDFX; MEINHARD VON GERKAN, KRISTIAN BOCS/BLOOMBERG; MERKEL, MICHAEL GOTTSCHALK/PHOTO THEK/GETTY IMAGES



Klaus Wowereit
The Berlin mayor
resigned as chairman
of the board of
oversight in 2013



Hartmut Mehdorn
In late 2014, the
former head of the
national railway quit the
airport project



Angela Merkel
In her second term,
she was to attend the
airport ribbon-cutting;
her third term could
be over before it
finally opens

systems, windows, elevators, and staircases. At one point, in 2009, outside controllers urged Schwarz and his engineering chief to shut down construction for half a year to give the architects and contractors time to coordinate efforts. Schwarz, Delius says, ignored them. Just months before the scheduled June 2012 opening, the terminal was a mess. Careless workers stepped on and shattered glass being installed by other companies. Heavy equipment rolled across the terminal floor, scratching expensive tiles. Tempers flared; small contractors complained they weren't getting paid and threatened to walk off the job.

Following the humiliating announcement in May 2012 that the grand opening was off, the theater of the absurd escalated as executives, board members, and contractors

and in late 2014 a Berlin court ordered the airport owners to pay Schwarz €1.14 million in damages for his dismissal, saying the board of oversight shared responsibility for the fiasco. In an e-mail to *Bloomberg Businessweek*, Schwarz said he felt vindicated by the court's decision, concluding, "There is nothing to add."

In the two years since Schwarz and Wowereit's dual exit, the owners of the airport have reshuffled the board of oversight and burned through another management team. Schwarz's successor, a short, stocky official named Hartmut Mehdorn, 72, is a close friend of former German Chancellor Gerhard Schröder. While head of Deutsche Bahn, the German national railway, Mehdorn supervised the construc-

schemes to get the airport up and running. At one point he proposed opening just the northern pier. A terrible idea, says Delius: "It was never meant to be opened separately from the rest of the terminal. There were no luggage carousels, no check-in counters, and the only way to reach it would have been to walk across the runway."

By December 2014 relations between Mehdorn and the board had gotten so bad that the board considered hiring a headhunter to find his replacement, according to Delius and others. Hearing about the plan, Mehdorn quit. After his exit, nobody wanted the job. Mehdorn could not be reached for comment.

In February 2015 the board managed to lure Karsten Mühlenfeld, the well-regarded 51-year-old former chief of engineering at Rolls-Royce Germany. It also hired a former Siemens manager as his technical director. One of the first moves the two made was to yank out and reinstall the miles of cables. Then they turned to the fire prevention system. Smoke now channels upward through chimneys, in accordance with the laws of physics.

The board says construction should be completed by the middle of 2016, to be followed by fresh rounds of testing by ORAT crews. If all goes according to plan, says Mühlenfeld, the airport should begin operations in 2017. Berliners are trying to remain patient as tourism is booming and growth is limited by a lack of flights. "The number of defects that they've found has grown to 150,000, including 85,000 serious ones," says Vogel.

On a Saturday afternoon in July, I board a bus in the Schönefeld parking lot for a two-hour public tour of the deserted airport. The tour leader seems almost to revel in the airport's cursed history. The project had been a disaster, he says. Still, the terminal building is impressive. We enter the giant structure and walk across floors of light-gray tile, past check-in counters made of artificial walnut. The infamous second level looms above, filled with restaurants and duty-free shops, all done in the same tasteful faux wood. Twin pairs of stainless-steel chimneys rise out of the ceiling. An express train rumbles into the station directly beneath the terminal. Eventually, four trains an hour will whisk passengers to and from central Berlin in 20 minutes. The terminal has a light, spacious feeling, with panoramic sightlines reminiscent of the aesthetics at Berlin Hauptbahnhof.

"You have to say that it is a really cool airport," Delius says. "The architecture is good. The concept is good. It is very easy-going, easy to navigate. It should please a lot of people—if it ever gets finished." **B**

number of defects they've found

turned on one another. Schwarz presented the board with a list of accusations against von Gerkan and his firm, charging that the architects had misled management with overoptimistic reports on their progress. The architects were fired, along with dozens of other key planners, slowing the project further. "Schwarz lost all their know-how," says Hermel, the radio journalist. "They were back at Square One."

Von Gerkan shot back. In a 2013 tell-all book, *Black Box BER*, he accused Schwarz of resisting all attempts at dialogue. Schwarz "had no concept, only insatiable demands," von Gerkan wrote, and lived inside "a fairy tale." That same year, after it became clear that Wowereit's repeated predictions of an imminent opening were unrealistic, the mayor stepped down as chairman of the board of oversight. (He later resigned as mayor.) Schwarz was fired days after Wowereit left the board of oversight. He sued for wrongful termination,

tion of Berlin's Hauptbahnhof, the central train station, in a contentious collaboration with von Gerkan. Hauptbahnhof is considered a German triumph: "If all Americans could compare Berlin's luxurious central train station today with the grimy, decrepit Penn Station in New York City," Thomas Friedman wrote in the *New York Times* in 2008, "they would swear we were the ones who lost World War II."

Mehdorn came into the Berlin Brandenburg job determined to turn it around. "He is a whirlwind," says Axel Vogel of the Green Party. After a year of paralysis on the building site, one of Mehdorn's early moves was to turn on the fountain in front of the deserted terminal to signal that he would get things done. But almost as a mocking counterpoint, the lights in the terminal couldn't be turned off because of a computer glitch no one could fix, and the electricity bill soared.

Mehdorn squabbled with his engineering chief and antagonized the board of oversight with his ill-conceived

If You Purchased Freight Forwarding Services Providing domestic and international shipping, *You Could Get Benefits from a \$197.6 Million Settlement*

If you or your company used the services of certain freight forwarders, you may be entitled to a potentially significant cash payment from class action Settlements. This is the second notice in this case. Settlements have now been reached with 19 additional Defendants. Settlements were previously reached with 10 Defendants.

The Settlements involve a lawsuit claiming that certain freight forwarding companies secretly agreed to prices for their freight forwarding services worldwide, including on routes in the U.S. and between the U.S. and China, Hong Kong, Japan, Taiwan, India, Germany, the U.K. and other parts of Europe. Some of the companies ("Settling Defendants") that were sued have agreed to Settlements (see list below). The Settling Defendants deny that they did anything wrong. The lawsuit continues against the Non-Settling Defendants.

Freight Forwarders provide transportation, or logistics services for shipments relating to the organization or transportation of items via air and ocean, which may include ancillary rail and truck services, both nationally and internationally, as well as related activities such as customs clearance, warehousing, and ground services.

Who is Included

You may be included in one or more of the Settlements (as a Class Member) if you: 1) Directly purchased Freight Forwarding Services; 2) from any of the Settling or Non-Settling Defendants, their subsidiaries, or affiliates; 3) from January 1, 2001 through January 4, 2011; 4) in the U.S., or outside the U.S. for shipments within, to, or from the U.S. All you need to know is in the full Notice, located at the settlement website: www.FreightForwardCase.com, including information on who is or is not a Class Member.

What Do the Settlements Provide?

The Settling Defendants will establish a Settlement Fund with a minimum of \$197.6 million. The amount

of your benefits will be determined by the Plan of Allocation, which is posted on the settlement website at www.FreightForwardCase.com.

How to Get Benefits?

You need to submit a Claim Form, online or by mail, by **March 31, 2016** to get a payment from the Settlements. You can obtain a Claim Form by calling one of the numbers below or by visiting the website. If you already submitted a Claim Form for the first round of Settlements, you do not need to file a new claim. You will automatically be paid from this second round of Settlements.

Your Other Rights

Even if you do nothing you will be bound by the Court's decisions. If you want to keep your right to sue a Settling Defendant yourself, you must exclude yourself by **September 18, 2015** from that Settlement. If you stay in a particular Settlement, you may object to it by **September 18, 2015**. The Detailed Notice, available at the website, explains how to exclude yourself and object.

The Court has appointed lawyers to represent you at no charge to you. You may hire your own lawyer at your own cost. The Court will hold a hearing on **November 2, 2015** to consider whether to approve: (1) the Settlements, (2) a request for attorneys' fees up to 33% of the Settlement Fund, plus interest, and reimbursement for litigation expenses. You or your own lawyer may appear and speak at the hearing. At the end of this litigation Class Counsel may ask the Court to award each Class Representative an amount not to exceed \$75,000 in recognition of each Class Representative's service in recovering funds for the Class. Notice of any such request will be provided at the website, www.FreightForwardCase.com.

This notice is only a summary. For detailed information:

Call U.S. & CANADA: 1-877-276-7340 (Toll-Free) INTERNATIONAL: 1-503-520-4400 (Toll)
or Visit www.FreightForwardCase.com

The "Settling Defendants" are SDV Logistique Internationale ("SDV"); Panalpina World Transport (Holding) Ltd. and Panalpina, Inc. ("Panalpina"); Geodis S.A. and Geodis Wilson USA, Inc. ("Geodis"); DSV A/S, DSV Solutions Holding A/S, and DSV Air & Sea Ltd. ("DSV"); Jet Speed Logistics, Ltd., Jet-Speed Air Cargo Forwarders Inc. (USA), and Jet Speed Logistics (USA), LLC ("Jet Speed"); Toll Global Forwarding (USA), Inc., Baltrans Logistics, Inc., and Toll Holdings, Ltd. ("Toll"); Agility Holdings, Inc., Agility Logistics Corp., Geologistics Corp., and Geologistics International Management (Bermuda) Limited ("Agility"); United Parcel Service, Inc. and UPS Supply Chain Solutions, Inc. ("UPS"); Dachser GmbH & Co., KG, doing business as Dachser Intelligent Logistics, and Dachser Transport of America, Inc. ("Dachser"); Deutsche Post AG, Danzas Corporation, DHL Express (USA) Inc., DHL Global Forwarding Japan K.K., DHL Japan Inc., Exel Global Logistics, Inc., and Air Express International USA, Inc. ("DHL") for the severed, Japanese claims only; Hankyu Hanshin Express Holding Corporation t/n/a Hankyu Express International Co., Ltd. and its subsidiary, Hankyu Hanshin Express Co., Ltd., and its U.S. subsidiary, Hanshin Air Cargo USA, Inc. ("Hankyu Hanshin"); Japan Air cargo Forwarders Association ("JAFSA"); Kintetsu World Express, Inc. and its U.S. subsidiary, Kintetsu World Express (U.S.A.), Inc. ("Kintetsu"); "K" Line Logistics, Ltd., and its U.S. subsidiary "K" Line Logistics (U.S.A.), Inc. ("K" Line"); MOL Logistics (Japan) Co., Ltd., and its U.S. subsidiary MOL Logistics (USA) Inc. ("MOL Logistics"); Nippon Express Co., Ltd. and its U.S. subsidiary, Nippon Express USA, Inc. ("Nippon Express"); Nissin Corporation and its U.S. subsidiary, Nissin International Transport U.S.A., Inc. ("Nissin"); Yamato Global Logistics Japan Co., Ltd., and its U.S. affiliate, Yamato Transport U.S.A. Inc. ("Yamato"); Yusen Air & Sea Service Co., Ltd. and its U.S. subsidiary, Yusen Air & Sea Service (U.S.A.), Inc. ("Yusen").

ARCHIE
LOOKS DIFFERENT

NOT-SAD DESK SALAD

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CAREER

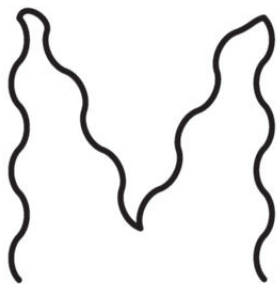
ETC

The



Solution

A cosmetics startup
knows that live
microbes are the secret
to healthier skin.
Will anyone believe that?
By Caroline Winter



ost startups have a fridge full of beer. At AOBiome in Cambridge, Mass., there's no room for booze. The shelves are loaded with bottles of the biotech company's signature product, a live-bacteria solution to spritz on the face and body. The spray is intended

to help reduce a user's dependence on soap, deodorant, and moisturizer. "It's a challenging concept," says Jasmina Aganovic, AOBiome's general manager for consumer products. "We live in a world with Purell on every corner."

To make spray-on bacteria more appealing, AOBiome is reintroducing its line this summer under a new name, Mother Dirt, a reference to the soil from which the key ingredient is derived. The company also created playful packaging and is releasing bacteria-friendly shampoo and cleanser. "We've been glued to our computer screens watching the response online," Aganovic says on relaunch day in early July. She's standing in AOBiome's office, a windowless room with red walls near the Massachusetts Institute of Technology. "This is our best day ever," she adds. Hundreds of orders have come in, sometimes as many as 10 per minute. Almost half are from new customers.

The idea behind the \$49 mist goes back to the late 1990s, when the company's founding scientist, David Whitlock, an MIT-trained chemical engineer, went on a date with a bubbly fifth-grade teacher, who asked him why her horse liked rolling in the dirt. Hoping to impress her, Whitlock began brainstorming and eventually realized that ammonia-oxidizing bacteria (AOB) in the soil must be helping the animal clean itself. "I read a few hundred papers and realized if horses evolved this behavior, it must be important," he says.

Romance never blossomed with the teacher, but Whitlock continued reading up on biology, gathering soil samples, and growing bacteria in his basement. AOBs, he learned, convert the urea and ammonia in sweat—which is abrasive to the skin, causing acne and irritation—into nitrite, which fights most bad bacteria, and nitric oxide, which has anti-inflammatory properties. Whitlock concluded that the useful bacteria once lived on humans, too, at least until we began sterilizing our body with countless lotions and potions.

AOBiome is the first cosmetics company to

market a product that purposely contains live bacteria—they don't cause illness, even if ingested—which sets Mother Dirt apart from the glut of recent scientific skin-care items. Other companies, including giants L'Oréal and Estée Lauder, are also investigating the role of bacteria in healthy skin. Clinique advertises "probiotic technology," though its products contain preservatives that may kill living strains. (Clinique didn't respond to requests for comment.) Earlier this year, scientists at New York University Langone Medical Center published an inventory of bacteria living on members of the isolated Yanomami tribe in Venezuela's Amazon. Its members don't use Western hygiene products or antibiotics—and incidentally have few skin problems.

Topical bacteria products are aimed at a culture that's increasingly all-natural. "It wasn't too long ago that the parents who gave their babies organic baby food were considered extremist," says David Finkel, an investor in AOBiome. "Today, if you don't do that, you're considered a bad parent." Larry Weiss, the company's chief medical officer, points to the American obsession with yogurt containing live cultures. "Look, if I told you 10 years ago that major food companies would be selling that," he says, "you'd have been shocked."

On a hunch in 2000, Whitlock began adding AOB to water and dousing himself daily. He dispensed with all modern hygiene, because soaps, even natural ones, kill the microbes, as do the preservatives in most products. As he suspected, the bacteria kept him clean and odor-free. It's been about 12 years since Whitlock's last shower. His skin looks great, and he smells perfectly fine.

He never intended to sell his tonic as a beauty product. But in 2010, he won a broad-ranging patent for all application of AOBs to the human body. Three years later, Whitlock co-founded AOBiome as a pharmaceutical company focused on getting U.S. Food and Drug Administration approval for bacteria-based prescription therapies for acne, eczema, rosacea, wound healing, and more. The team raised two rounds of seed funding from more than a dozen



The old packaging concept...



...and a dramatization of it

"It wasn't too long ago that the parents who gave their babies organic baby food were considered extremist"



← Aganovic on relaunch day

angel investors for undisclosed sums. Then they began developing a cosmetic spray to test the concept outside the lab, reasoning that skin-care products are cheaper to get on the market than medications.

They recruited subjects to try the mist for a month. Their product went viral after one guinea pig, *New York Times* writer Julia Scott, wrote about cutting out her personal-care regime. After suffering through an initial phase of greasy hair and smelliness, she fell for the idea. "For the first time ever, my pores seemed to shrink," she wrote. But the product wasn't officially for sale yet. Preorders flew in, and the company, which employed four people at the time, was backlogged for months.

Early adopters were largely urban professionals, not tree-huggers. "They're young people who take an active role in their health and don't necessarily think their doctor knows best," AOBiome's Aganovic says. Men and women ordered the product in equal numbers; many were the type who take probiotics and follow a paleo-style diet. "We have a lot of entrepreneurs," she says. "People have called us the Soy lent of skin care."

I was one of these people. I've been using the spray on my face for a year. I still bathe every day—the company doesn't bill itself as a replacement for showers—and wash with regular facial cleanser occasionally, plus wear bacteria-killing sunscreen now that it's summer. But I rely on the mist. Over the winter my skin, which normally turns horribly dry even while using serious moisturizers, was noticeably less irritated.

When friends comment that my complexion looks nice, I tell them about the spray. None have adopted it. One famous makeup blogger looked at me with sheer disbelief, and perhaps horror, when I told her I put bacteria on my face. Many other users refrain from telling anyone at all they're hooked on bacteria. It didn't help that the original spray had a sterile, scientific look, with an awkwardly protruding nozzle.

Hence the rebranding. Aganovic, 28, with a degree in chemical biological engineering from MIT, came up with new tag lines—"Rethink Clean" and "Go Ahead, Get a Little Dirty"—that she says sounded "edgy but not alienating." They chose the name Mother Dirt to highlight the nurturing side of soil. ("Dirt is magic," she adds.) At one point, Aganovic and creative director Mark Drury considered using dreamy images of people dancing through a cloud of dust for the package design. But the resulting test photos, staged using all-purpose flour and the two of them in their undies, were dismissed as too feminine. The end product looks like something you'd find on the shelves of REI, with a logo featuring a small androgynous blob. "We call him



From top: Whitlock in his office; testers at a Brooklyn event; the rebranded products



Mr. Speck, as in speck of dirt," Drury says.

In July, on relaunch day, Whitlock sits at his desk wearing his usual uniform: wire-rimmed glasses, flannel button-down, jeans, and hiking boots. He's often lost in thought. For his 60th birthday in January, his entire staff came to work dressed like him—he didn't even notice. His desk is littered with empty cardboard boxes, a container of latex gloves, and a coffee mug, emblazoned with the logo of the antidepressant Sertraline. "I've been on it for 20 years," he says. After a pause, he adds: "Putting this bacteria on my skin did more for my mental health in terms of depression, PTSD,

anxiety, and Asperger's than 20 years of Sertraline and psychotherapy." Because of federal regulations, the company makes no claims about the spray's potential mental or cosmetic benefits.

But Whitlock's personal results are what drives his interest in the work. "We need to do clinical trials," he says. "My biggest fear is the FDA shutting us down if they think we're making false claims."

The team, now 11 people, hopes to make pharmaceutical breakthroughs and earn revenue from existing and new patents. This spring the FDA gave the company the go-ahead for a Phase II study to develop an AOB-based acne medication.

If all goes well, it will be available by 2017. The startup remains unprofitable, though it has enough capital from investors to conduct expensive pharma trials. And if enough people start buying supplies of mist, shampoo, and cleanser—a monthly regime that retails for \$69—Mother Dirt's profits will help fund that medical work. So far, Aganovic says, "several thousands" have tried the spray and become repeat customers.

Two days after the relaunch, AOBiome hosted a dinner for 60 fans in Brooklyn, N.Y., home

to its largest user base. The crowd, gathered at a chic farm-to-table restaurant, includes several entrepreneurs, a lawyer, a stockbroker, and at least one young hedge fund manager who regularly sprays himself and his four young children. "I was expecting people to be a little more hippy-dippy," says Leslie Engel, 38, a redhead who works in philanthropy and uses the mist as the finishing touch of a conventional cosmetic routine that includes deodorant, shampoo, face wash, and makeup. Not that there aren't some oddballs in attendance. "I hate taking showers, because I'm very lazy, and I like to save water," says Hugh Loebner, the former chief executive officer of a metal-parts manufacturer. "This

could fix California's drought problem," he jokes. Most customers are more interested in fixing their face. "I've been waiting for a product like this for years," says Dave Kliman, 49, an app developer. "It's like having a little molecular army of guys cleaning me, little maintenance men. I'm getting cleaner just sitting here." **B**

ULTIMATE OFFICE LUNCH

Greens

"I like all types of lettuce, but herbs add a lovely new texture," says Matt Wilkinson, who lives in Melbourne. Here he mixes **mâche**, **dill leaves**, and **flat-leaf parsley**, but arugula works, too.

Avocado

Pack it separately. Dice and mix half onto the plate right before you eat, otherwise it will turn gross and brown.

Sweet Potato

Stab one with a fork all over and bake at 400F until tender (30 to 50 minutes, the night before). Let cool, peel, and slice into coins. In a rush? Pierce and microwave at the office for 7 minutes.

Pecorino

This nutty Italian cheese will take on a light, almost airy texture if you **grate it with a Microplane**. Be generous.

The chef behind a hit summer cookbook, Mr. Wilkinson's Well-Dressed Salads, creates a satisfying meal that's restaurant-level tasty yet takes 10 minutes to throw together in the morning

Dill Pickle

"An Australian giving tips to Americans on dill pickles?" Wilkinson says. "That's like giving tips to Mike Jordan on a slam-dunk." You'll want a small one, cut into uneven chunks.

Walnuts

About a handful. "Ask for this season's nuts or last's for better quality," he says. **Freshness is important** and often overlooked.

Fennel

Thinly slice a bulb. Put some in your salad and the rest in the freezer for a cold summer snack.

Lemon and Walnut Dressing

Whisk the juice of 2 lemons with ½ cup grapeseed oil, 3 tablespoons walnut oil, 1 tablespoon warmed honey, and 1 garlic clove, finely chopped, then salt to taste. **Add just before eating**, or the ingredients will get too soggy.



ARCHIE VS. ARCHIE

Want to update an old comic? Just add smartphones
By Jennifer Chaussee

With his chiseled jawbone, drainpipe denim, and Justin Bieber haircut, the new Archie is a far cry from the bumpkin you probably remember. This one was unveiled at a Comic-Con event in San Diego in early July, during an announcement from publisher Archie Comics that it would introduce a series starring dramatically modernized versions of its classic characters.

Archie #1 starts at the beginning, back before a love triangle formed between Archie, Veronica—the dark-haired seductress—and Betty, the blonde next door. Yet the action takes place in the 21st century: In place of the polyester pants and fresh-scrubbed faces that defined the series since it started in 1941, you'll find Betty in low-slung, ripped jeans and Jughead

looking more like a

stoner than a jester. In a slow-reveal strategy, the new Veronica—object of millions of baby boomer fantasies—won't appear until the second issue.

When Jon Goldwater took over his father's publishing company in 2009, "it was clear that *Archie* was moving down the path of irrelevancy," he says. The publisher had spent six years experimenting with ways to update the brand. In 2010 it introduced Kevin Keller, the series' first openly gay character. Then came *Life With Archie*, in which the wholesome lead jumped into the path of a bullet to save Keller's life. Next, *Afterlife With Archie* showed the quiet town of Riverdale overrun by zombies. Sales rose, so the team decided to go a step further, starting from scratch and going after younger fans.

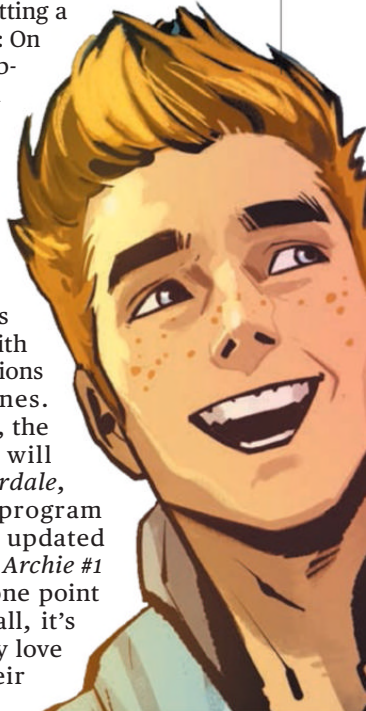
After slumping in the aughts, the comic book industry has rebounded—overall sales in North America hit \$935 million in 2014, up 7 percent from the previous year, according to industry website Comichron. Indie titles such as *Saga*, a science-fiction fantasy, are most popular, so that comic's illustrator, Fiona Staples, was a shoo-in for the *Archie* job. "If she said yes, there were going to be no conversations with anybody else," Goldwater says. Staples, already an *Archie* fan, signed on immediately. She teamed up with writer Mark Waid, known for his work on *Superman* and *The Flash*.

Modernizing *Archie* was expensive, according to Goldwater, who declined to share revenue figures for the privately held company. "You hire the top talent,

so costs increase, but it's a small price to pay, because we're rebranding the entire *Archie* universe." Preorders for *Archie #1*, which costs \$4, were the highest the publisher has seen in six years.

Aesthetics aside, much has changed in Riverdale. The student body is ethnically diverse, one character is handicapped, and almost everyone is glued to a smartphone. The old characters bonded over trips to the mall; the new ones spend most of their time texting or chatting online. (The comic itself is available for digital download.) "Kids don't socialize the same way they did 20, 30 years ago," Waid says. "They're almost exclusively on social media, which is antithetical to [visual] drama." Technology appears in almost every frame, though, as is sometimes the case when nostalgic products are upgraded for a new generation, it doesn't come off as if they're guessing at the ways young people communicate. Even the different ways characters hold their phones feel true to life.

That's not to say the publisher has a runaway hit. Already, Goldwater's getting a little gimmicky: On July 22, the publishers released a crossover issue, *Archie vs. Sharknado*. They're also planning another tie-in that shows the characters hanging out with illustrated versions of the Ramones. Then, this fall, the CW network will premiere *Riverdale*, a television program featuring the updated characters. If *Archie #1* wants to get one point across, after all, it's that kids really love staring at their screens. **B**



READ, SKIM,
SKIP

WHAT'S
YOUR VICE?

READ



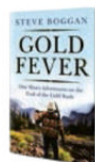
ZeroZeroZero
By Roberto Saviano
The author of the best-seller *Gomorrah*—which exposed Italy's mafia—is under police protection. That didn't stop him from writing this deep, cinematic account of the ways cocaine affects global trade, business, and everyday life.

SKIM



Stoned: A Doctor's Case for Medical Marijuana
By David Casarett, M.D.
A University of Pennsylvania professor wanted to debunk prescription weed but wound up convinced of its benefits. Interesting case studies give a smart look at a subject that's often treated like a joke.

SKIP



Gold Fever
By Steve Boggan
It's timely to read about gold, of course, so this journalist set out on the original California trail to see if he could find some of the precious metal himself. It's fine as a travelogue, but the premise feels twee within the first 50 pages.

Etc.

Fashion

Stretchy and super comfortable. Piping on the sleeves and collar defines your features.

Orley

Dexter chevron jacquard polo, \$545; [orley.us](#)



Fred Perry

Marshall Amplifications knitted shirt, \$330; [fredperry.us](#)



SUMMER FRIDAY SHIRTS

A mélange knit, mixing varied types of thread, adds a vintage vibe and feels less heavy than a standard weave.

Orlebar Brown

Felix polo shirt, \$120; [orlebarbrown.com](#)



cos

White polo top, \$89; [costorex.com](#)



Choose an interesting silhouette so your basics do double-duty. When this one's untucked, it has a long, asymmetrical hem.

Textured piqué cotton was once used to wick sweat away during tennis. In a neutral, it plays nicely off this year's patterned pants.

Club Monaco

Pajama piqué polo, \$69.50; clubmonaco.com



Thom Browne

Short-sleeve classic piqué polo, \$350; thombrowne.com



This season's retro polos are reason enough to leave work early

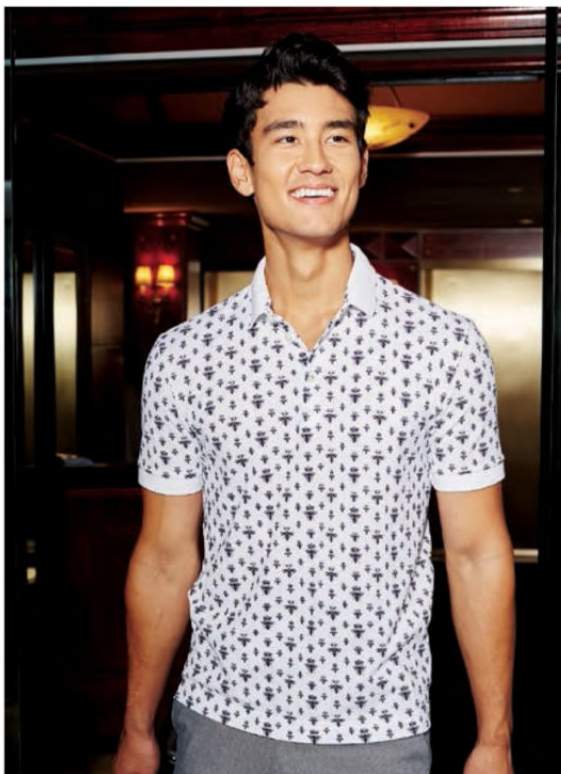
Totême

Rhones short-sleeve polo, \$480; net-a-porter.com



Dolce & Gabbana

Black-and-white cotton print polo, \$545; dolcegabbana.it



Cashmere! Extra breathable, it's ideal on a sweltering day.

NO MORE GATORADE

Pro athletes and life hackers are adopting a new style of liquid electrolytes. By Gordy Megroz

The next great sports drink wasn't perfected on the field. In 2011 sports physiologist Allen Lim was hanging out in his friend's garage in Boulder, Colo., mixing together powdered ingredients—potassium, sodium, glucose, fructose, and various electrolytes—in paint buckets. “If you bought them from the local hardware store, they gave you lifetime free shaking on the machine,” he says. “I doubt they knew I wasn't mixing paint.” His mission was to package a healthy, effective alternative to mainstream syrupy options. “It's not just that those drinks have too much sugar,” Lim says. “They have excess flavoring, coloring, preservatives, and vitamins—all those molecules contribute to gastrointestinal distress.” (Gatorade, which has 80 percent of the market, disputes this idea and argues the sugar in its drink is “designed to provide fuel for athletes,” says spokeswoman Lauren Burns.)

Lim worked much of the last decade for the Slipstream cycling team (now the Cannondale-Garmin Pro team) as its riders competed in the Tour de France. His job was to ensure the 25 cyclists were getting proper training, food, and liquids. “But their guts hurt,” he says. “They were throwing up and getting cramps.” He traced the issue back to the squad's go-to drink, a popular brand he won't disclose. He tested every other option on the market, all of which caused similar issues. “We tried cutting them with water,” he says. “But then they weren't getting enough salt. So we added Alka-Seltzer tablets, which made it taste gross.”

Then he started experimenting with homemade concoctions. He tested those on the team's top athletes, including Bradley Wiggins, who would go on to win the 2012 Tour. After a year of trial and error, the formula started working well, and cyclists from other teams began to ask for the secret swill, too. “I completely avoided our team sponsor's drink and

would sneak Allen's into my water bottles,” says Ted King, a professional cyclist.

At first, Lim made the product only for athletes who asked. Then, in 2010, sports drink company FRS—which sponsored Lance Armstrong at the time—offered to buy Lim out. As he mulled over the contract, a bird flew by and pooped on it. “I took that as an omen,” he says.

Instead, he went into business with two partners, investing \$200,000 to create a company, Skratch Labs, aimed at pros and more casually fit folks. “There are more people

participating in things like running and bike races,” says David Clucas, deputy editor of *SNews*, a trade publication that covers the industry.

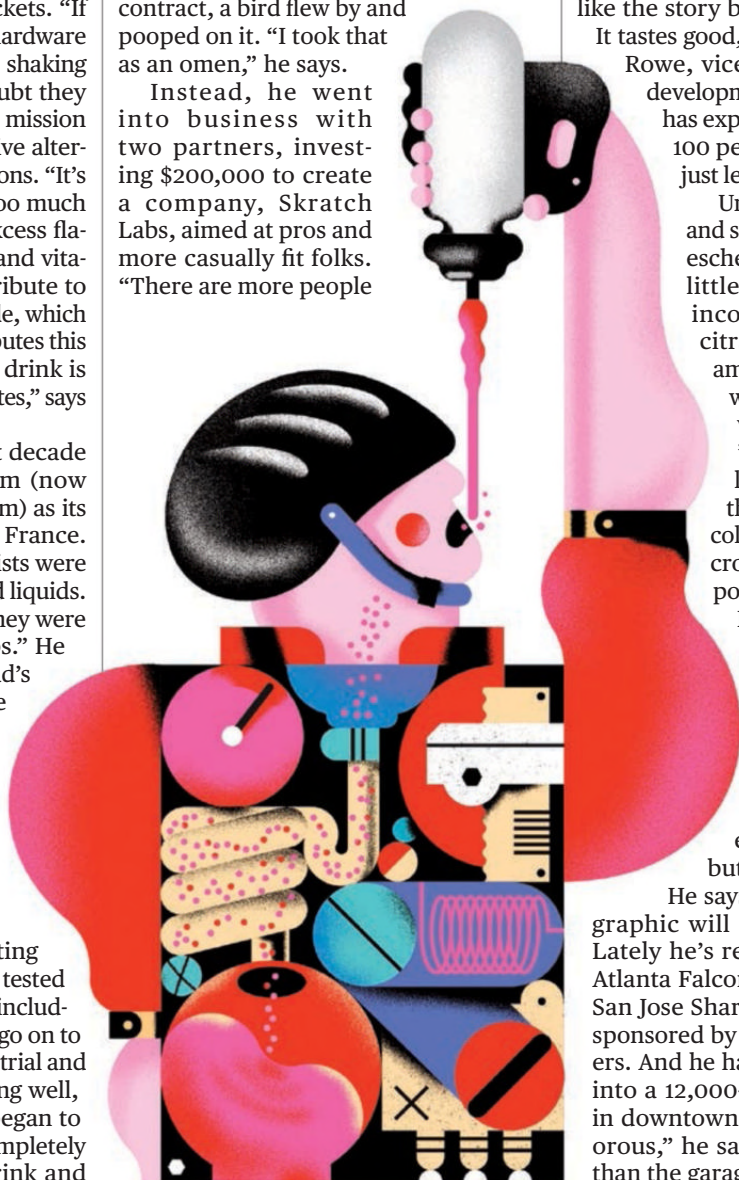
That's given rise to boutique electrolyte drinks, most of which are sold in national groceries like Whole Foods and Kroger. No one tracks category sales yet, but the running retailer Fleet Feet says it sold about \$900,000 worth of specialty sports drinks in 2014, and that number will increase to \$1.1 million this year. Fifty-six percent of its sales are for beverages from Nuun, a company in Seattle that's seen 40 percent growth during the past two years and expects to take in \$20 million in 2015. But Skratch Labs (\$19.50 for 40 servings) is Fleet Feet's fastest-growing offering: In one year, it's swelled to about 10 percent of boutique drink sales. “People like the story behind how it was made.

It tastes good, and it works,” says Luke Rowe, vice president for business development at Fleet Feet. Skratch has expanded sales by more than 100 percent each year, earning just less than \$5 million in 2014.

Unlike Gatorade, Powerade, and some other producers, Lim eschews colorings. He uses as little sugar as possible and incorporates more sodium citrate to better match the amount of salt we lose when we sweat. “When Gatorade was first formulated in the '60s, it was probably a lot like Skratch,” he says. “But then they added sugar and color to sell it to the 7-Eleven crowd.” Skratch is sold as a powder, for portability, and Lim also makes hydration mixes (\$2 powder packets), including one geared toward efficiency-obsessed office workers.

Most scientists argue people get plenty of electrolytes from food, but that doesn't deter Lim.

He says the sports drink demographic will only continue to grow. Lately he's received orders from the Atlanta Falcons, Boston Red Sox, and San Jose Sharks, even though they're sponsored by other drink manufacturers. And he had to move his operation into a 12,000-square-foot warehouse in downtown Boulder. “It's not glamorous,” he says, “but it's a lot bigger than the garage.” **B**



What's Moncur?

A branding and digital agency. We help companies market and sell what they do.

Who are your clients?

Professional firms—engineers, architects, lawyers, and accountants—people who offer sophisticated, hard-to-explain services that are very expensive.

Do you try to look a certain way for clients?

People hire me to develop brands, so when they see me, I should give them the feeling they're trying to buy.

MORGENTHAU
FREDERICKS

NORDSTROM

HUGO BOSS

TED BAKER

DAVID DONAHUE

MAGNANNI

HUGO BOSS

LORENZO UOMO

MAGNANNI

What's your personal fashion brand?

I work to have things that are unique. People remember me for my hair and glasses a lot. These glasses are hand-stained blue at the temples and aren't widely available.

Your hair is silver.

It's half-black, half-white, and it creates this really cool textured silver color. It's natural.

You have offices in Austin, Detroit, and Miami.

My wardrobe is full of things that play in all three markets. I can lose the coat or trade out the slacks for jeans.

What do you pick out first?

I grab a shirt-and-jacket combo. Glasses are the last thing, if I need something highly contrasting.

Tight or loose?

Pretty fitted. I work hard to stay in very good shape, and I like to show that off a little.

DAVID MONCUR

48, principal,
Moncur, Detroit

You're kind of formal for a creative.

In my business, jeans and tennis shoes would never fly. They wouldn't entrust us with the brand of a gigantic corporation.



RUSSELL SIMMONS

Producer and entrepreneur



"I worked at Orange Julius. I served hot dogs and stuff. I didn't know better then—I'm vegan now."



Beastie Boys

"I went for four years and studied sociology, because it was the easiest thing I could find. I didn't graduate."

West



"We signed the Beastie Boys all the way through Kanye."



With kids at RUSH Foundation, 2010

"It's the leading online destination for celebrity entertainment, music, culture, and politics for the new, post-racial America. We just sold it."



Argyleculture bow tie



"I have a lot of fun designing clothes for Argyleculture and Tantris, our yoga line."

With daughters Aoki and Ming Lee during the Bombay Sapphire Art for Life event, 2014

Education

August Martin High School, Jamaica, New York, class of 1975

City College of New York

Work Experience

1979–84
Music manager

1984–98
Co-founder, Def Jam Recordings

1992–2004
Founder and chief executive officer, Phat Fashions

1995–Present
Co-founder and chairman, RUSH Philanthropic Arts Foundation

2003–Present
Co-founder, UniRush

2007–Present
Author

2007–14
Founder and chairman, Global Grind

2007–Present
Founder, Simmons Design Group

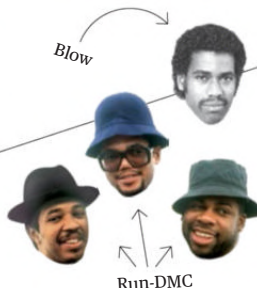
2013–Present
Co-founder, Narrative

2013–Present
Operating chairman, All Def Digital

Life Lessons



With Def Jam co-founder Rick Rubin, 1987



"I was managing Kurtis Blow, Houdini, Jimmy Spicer, Run-DMC, and a bunch of others. I knew what to do because it was natural: protect and brand them."

"Tommy Hilfiger put me in the business in the first place. He gave me direction and helped me out."

"I got friends in the 'hood who get their check, get online to pay their bills, and are locked out of the banking industry. They needed an alternative."



With Oprah, 2014

"This is where I go to work every day—my film and TV companies run out of here. I have 11 pictures set up in Hollywood. I am Hollywood."



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*Based on comparison of Galaxy S6 and Galaxy S6 edge RAM with Apple's published specifications. Connection methods may vary depending on the type of connected devices or the shared content. Devices that support Quick Connect™ must have it enabled; devices that do not support Quick Connect™ must have Wi-Fi direct or Bluetooth enabled. © 2015 Samsung Electronics America, Inc. Samsung, Galaxy S, Knox and Samsung Business are all trademarks of Samsung Electronics Co., Ltd. Android and other marks are trademarks of Google Inc. Other company names, product names and marks mentioned herein are the property of their respective owners and may be trademarks or registered trademarks. Appearance of devices may vary. Screen images simulated. Printed in U.S.A.

A man in a dark suit, white shirt, and red tie, wearing glasses, is smiling and looking upwards. He is standing in front of a building with a large sign that reads "Schomburg Center".

*"THERE IS NO AMERICAN HISTORY
WITHOUT BLACK HISTORY."*

*DR. KHALIL GIBRAN MUHAMMAD
DIRECTOR, SCHOMBURG CENTER FOR RESEARCH IN BLACK CULTURE,
THE NEW YORK PUBLIC LIBRARY*

The New York Public Library's world-renowned Schomburg Center houses and promotes the history and culture of people of African descent. But it urgently needed renovations to keep its rich legacy alive. Citi provided the Center with the necessary financial support and guidance to bring its redevelopment plans to life. These changes will protect irreplaceable archives, increase visitor numbers and help to preserve the story of black culture for future generations.

For over 200 years, Citi's job has been to believe in people and help make their ideas a reality.

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